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Original.

CLINICAL NOTES ON A RECENT SERIES OF SURGICAL CASES.

BY THOMAS H. MANLEY, M. D., NEW YORK.

The successful practice of surgery is not altogether unlike the cultivation of a garden; the yield will in all probability depend not so much on the richness and fertility of the soil or a favorable season, as on the knowledge, the experience, and the industry of the husbandman.

Though much in isolated instances may depend on chance and fortuitous circumstances, our chief reliance, in the end, must rest on the firm ground-work of matured knowledge and extended effort. The cases here submitted have all come under my care and observation since the first of this year, and are selected because they belong to a class which commonly come before us, and of which, it may be said, that now, after more than several years experience in dealing with a very consideral number of them, the writer is enabled to report successes and results altogether in advance of what would have been possible at an earlier period, for time and observations have convinced me that even moderate success in the treatment of complicated surgical cases is utterly impossible without abundant opportunities for practice, together with a familiarity with the latest and the best work of our contemporaries in our own and foreign countries.

The cases selected for presentation here are of a traumatic and pathological order, regional and general.

Read at the Eleventh Annual Meeting of the Fifth District Meeting of the New York State Medical Association, held in Brooklyn, May 28, 1895.

CRANIAL LESIONS—FRACTURES OF THE SKULL—TRAUMA.

Since the first of March (1895) there have come under my care ten cases of fractures of the skull, four basilar, occupying the most vital, the cerebral and cerebellae regions; and six cases of fracture of the vault, the non-vital. The patients ranged in age from nine to fifty-six; there were nine males and one female, three were fatal and seven recovered. It may be said that this class of fracture is yearly becoming more common in New York. The immediate dangers attendant on cranial fracture arise in consequence of shock, hemorrhage and inflammation.

The features of special interest in connection with the cases here enumerated are first, those with reference to basilar fracture, involving one or more of the cranial fossae. We had quite unequivocal symptoms of this lesion; as a free discharge of serosanguinolent fluid, from one or both ears, with a free extravasate, into the subconjunctional tissues.

Traumatic depression of the bone substance of the skull is not attended with such definite symptoms of sensory or motor disturbances as we would be led to expect since the doctrine of cerebral localization has been promulgated. The most constant evidences of local injury to the cerebral substances of the brain, with such aphasic symptoms as pointed to local compression, were where there were distinct marks of inward displacement of fractured bone over the fissure of Rolando or the middle parietal convolutions.

My general line of practice, in cases of fracture through any area of the cranial vault, attended with a moderate indentation of bone but no cerebral symptoms, is to not inter-

fere, with a view of elevation or displacement. This line is especially adhered to when the seat displacement is over any of the large sinuses.

Cocaine as an Analgesic.—In the operative technique for elevating shattered and displaced fragments, of late, we have substituted pulmonary anesthetics altogether, by employing local, cocaine analgesia. This change has been most advantageous to the operator in lessening hemorrhage by the well-known hemostatic action of the medicament and obviating the necessity of so many trained assistants as would be otherwise rendered necessary.

The difference of the effects consequent on the utilization of this line of treatment is vastly in our patient's favor, as by it there is no such engorgement of the cerebral vessels as we always observe under ether, or no cerebral excitation at a period when it is obvious that violent commotion of the cerebral centres must be harmful to our patient, and persistent vomiting after operation is entirely prevented.

Debridement instead of the Trephine—Except, in rare instances, the trephine has been entirely displaced by me for the osteotome in elevating and removing depressed bone fragments, in skull injuries. By its cautious employment there is much less danger of damage to the dura-mater, the brain substance, or the cranial sinuses; and less bone may be sacrificed. For simplicity, safety and readiness of employment it is a great improvement on the trephine in this class of cases.

Asepsis and Refrigorants as Prophylactics—Experience has long since taught me that except for the scalp tissues all chemical solutions should be rigorously eschewed in skull fractures involving an operation. My early experience soon convinced me that any description of antiseptics when applied to the nude elements of bone anywhere, and the dura-mater and cerebral tissue in particular, are full of danger to the vitality of the protoplasmic elements and may be promptly followed by grave inflammatory changes.

Now nothing in my service is ever employed for flushing or cleansing in cranio-cephalic operations except sterilized water.

The ice-cap or ice cloths are immediately applied on the whole exposed walls of the skull and continued until reaction is fully established.

It is my conviction that moist cold over a traumatized surface is a potent prophylactic against consecutive inflammation, cellulitis or meningitis in all skull injuries, and should be always employed until about the third day, when it may be discontinued.

Mercury in Meningitis—Mercury is an agent of unrivaled excellence, judiciously administered, in inflammatory conditions of the fibro-serous membranes. On the meninges it acts with especial energy; therefore, why, in those cases of cranial trauma, a purgative dose of calomel is given early and repeated later should symptoms of meningeal trouble threaten; the dose of the drug benig so apportioned as to promptly secure its full therapeutic effect, without its possible lethal action.

FRACTURES OF THE LIMBS.

Fractures of the extremities we are almost never without in the Harlem Hospital service. In my own private hospital notes on this interesting and current type of truama there are more than two thousand cases enumerated, though more than four thousand cases have come under my notice in the past twelve years.

Since March 1st this year, we have had entered of fractures of the extremities ninety-one cases, seventy-six simple and fifteen compound. In the deluge of surgical literature spread before the medical profession, since the doctrine of antiseptics was established, it is singular to note that except in the treatment of the compound variety little has been presented on fractures of the extremities; in fact, this study has been allowed to lapse. There is, however, no class of surgical injuries of greater interest than those fractures which involve the structures on which we depend for locomotion and

prehension. Their correct treatment will reward us with a fair degree of restoration of contour and function; while, when managed on wrong principles, diminished power and motion are quite certain to follow.

The number here includes fracture of the clavicle, arm, forearm, leg, femur and bones of the hand and foot.

Muscular Relaxation rather than Forced Extension—The guiding principles which we observe in all fractures are, first to secure muscular relaxation and osseous reposition, without employing violence. Forced extension or counter-extension in certain fractures are not wanting in theoretic support; but in fracture a considerable experience, with careful observations, have convinced me that continued tension on a limb rather provokes muscular rigidity than effects relaxation. Besides, the co-existing pressure on the main blood-trunk and tendency to sloughs in enforced confinement to bed are among the drawbacks of steadily maintained tension. The rule of physics will not apply to fractured bones, otherwise such a thing as deformity after their treatment would be impossible, except in the event of great loss of bone.

Muscular relaxation and support to the mangled tissues favors the falling of the fragments into their natural position. There they will remain and restoration of contour will be the rule, in many bones, but with the clavicle and humerus incessant respiratory movement, and in the femur the demands of nature and the necessity of frequently shifting the body are disturbing influences which nothing can entirely overcome, and hence some sort of support is necessary.

Support of the Fragments rather than Fixation with Gypsum—When plaster of Paris mould was first introduced it was at once seized on as the ideal material for fracture adjustment. It does serve a useful purpose when employed in appropriate cases; but everything is buried under it, and its removal is always attended with a jarring of the limb. For a long time it has been my custom to employ it, never as a primary dressing, though after the provisional callus is formed it answers a useful purpose.

In the treatment of compound fractures our first endeavor is to securely replace the fragments and close the wound—make the fracture a simple one.

In the compound comminuted, with immediate, partial or complete asphyxia, or destruction of the tissues, our aim is to first suppress all hemorrhage by closing separately the large bleeding vessels, thoroughly cleansing and dressing the wound and placing the parts under covering in a comfortable position.

FRACTURES OF THE SKULL. (10)

No. 10. | Vault 6. 3 compound. 3 single.
| Base 4. All simple.
Average age 32 yrs. | Vault 1 | Succumbed 5
Survived | Base 2 | " 2
Of this number 3 were railroad injuries.
" " " 9 were males and 1 female.
Fracture of the Nasal Bones.
One compound fracture. Female. 36 years.

CLAVICLE (8 fractures)

Outer Third 7 5 male, 2 female, average age, 19.
Middle Third 1 All simple

RIBS.

5th rib (1) 6th rib (1) 8th rib (1) | All simple.
9th rid (2) 7th rib (2) 10th rib (2) |

HUMERUS. (13)

Surgical Neck (1) Simple.
Middle Third (6) 1 Compound.
Lower Third (2) 1 Compound
Extern. Condyle (1) Simple.
Internal Condyle (3) Simple.

RADIUS. (18)

Middle Third (2) 1 Compound.
Colles' Fracture (16) Simple. 6 female. 7 male.

ULNA. (2)

Middle Third (2) Simple.

METACARPAL BONES. (1)

Metacarpal bone of index finger.

PHALANGES OF HAND (6)

2d phalanx. Index and middle finger.
1st and 2d phalanges. Thumb.
1st and 2d phalanges. | Index and middle fingers. | Compound fractures.
All phalanges of right hand. Compound.
2d phalange. Ring finger. Simple. No amputation.
3d phalange. Little finger. Traumatic amputation.

FEMUR. (6)

Intracapsular (3) | Simple.
Middle Third (2) |
Supracondyloid (1) Compound. Railroad.

TIBIA. (10)

Middle Third (7) 5 Compound.
Lower Third (3) 1 Traumatic amputation.

TIBULA. (15)

Middle Third (7) 2 compound. Simple.
Palb's fracture (8) All simple.

PATELLA. (1)

Nasal Bones (1) Compound.

TARSAL BONES. (1)

1 railroad case in which all the bones of the foot were ground into pulp.

METATARSAL BONES. (3)

3d metatarsal.
1st and 2d metatarsal.
All metatarsal bones. Compound. (Railroad).

PHALANGES (OF FOOT).

1st and 2d phalanges of 1st and 2d toes.	Comp.
1st and 2d phalanges of 4th and 5th toes.	

Little toe. Traumatic amputation.

PRIMARY AMPUTATIONS.

Primary amputation after disorganization of a limb in civil life is always questionable procedure, though when a limb has been practically traumatically amputated we may at once, with the scissors, divide the frayed integument or tendons. There have been lately eight amputations in my service for traumatism and pathological conditions. After reaction when the line of demarkation is formed in traumatic cases we run little risk of a sloughing flap.

Such a case now is under my care. The young man had his foot crushed off at the ankle joint by a railroad accident. Four days later after the line dividing the healthy from the dead tissue appeared, sufficient of the parts under the healthy skin were cut away, to allow the healthy integument to fall in over the ends of the bones and cover them without strain.

CERVICAL TUMORS.

Ten cases of serious submaxillary cervical tumors have come under my care within the past three months.

One was a case of sarcoma of large size, in an old man of 64; was refused operation. It was not apparently deeply lodged, though as there were rapidly developing new growths in the hard-palate, pharynx and spheno-palatine fossa, it was decided that an operation was not warranted.

One tumor of large size was a lipoma. This sprang from the loose suboccipital tissues and advanced forward and downward to dip under the posterior border of the sterno-mastoid muscle.

Importance of Accurate Diagnosis —One man on whom we operated had a voluminous growth, which occupied the whole quadrangle of the neck on right side, advancing up under the lower jaw and downward behind the left clavicle, to and through the apex of the pleural cavity. He had been operated on four months previously; the growth appearing consecutively, rapidly enlarging, and now so far encroaching forward under the deep cervical fascia as to encroach on the tracheal rings and threaten suffocation.

At the institution in which he was first treated operation was refused, as the growth was declared malignant. The mass was hard, unyielding and painful, with deep attachments. On a careful and thorough examination of his case it was my conclusion that the mass was wholly tubercular, and that while its removal would demand a very formidable operation, it was clearly within the range of operative surgery to turn it out safely. It was presumed that in the first operation the superficial absorbents were removed and that the regrowth consisted in a hyperplasia with central degeneration of the deep chains, which lie in deep contract with structures vital to life.

Hemorrhages in Operations on Voluminous Cervical Tumors for their Removal—The most formidable danger in the complete ablation of cervical neoplasms comes from hemorrhage, and there is nothing that so severely tries our courage and skill than the contact of it in this class of cases. Celerity and coolness must be combined when an arterial spring is opened, or the operative field is suddenly flooded by the vascular torrent. In infiltrating malignant growths of the neck their removal always entails great danger because of a steady oozing which cannot always be wholly staunched before dangerous anemia sets in.

In this case the operation of enucleation was commenced by dividing all the overlying structures in the centre, a vertical incision having extended across the entire mass. Great care was taken to clamp and ligate all the bleeding vessels, as we proceeded. The peripheral decorticature was comparatively simple; but as we penetrated into deep parts difficulties began to appear.

Early in the operation the internal-jugular vein was divided, and both ends ligated. Next, as we proceeded more deeply to turn the growth out, consecutively the cervicalis ascendens, the ascending thyroid, the trans-versaliscoli and occipital arteries were clamped, ligated and divided. Of the nerves the descendi noni phrenic and anterior cervical branches of the cervical-plexus were divided and their ends leased away from the elements of the tumor. The common carotid was adherent by its sheath from the clavicle, up to the point of bifurcation. The sheath with the pulsating vessel was cautiously detached from the under surface of the growth, and now, while endeavoring to enucleate the deep supra-clivicular lymphatics and press forward the subclavian artery, the pleural cavity was opened just below where the subclavian arches upwards. Now the whole mass was lifted out, leaving a large chasm, exposing the bracheal plexus, the large blood-trunks and trachea.

The opened pleura was then closed, the bleeding subsided and the edges of the integument brought together. In this case, although there was an extensive mutilation of tissue, but little blood had been lost. Our patient rallied well from the operation. His recovery was prompt, the line of incision closing by primary union, except at the part left for drainage. But little blood had been lost and no shock followed.

The mass proved to consist of an aggregation of tubercular glands; some simply hypertrophied, others were suppurating and caseous; all bound together by a dense inelastic matting of fibro connective tissue. Although the thyroid submaxillary and sublingual glands were freely exposed, no trace of infiltration was visible.

Of the seven other cases two were malignant, two were acute suppurative inflammation of the lymphatics; the remaining three, evidently two, were tubercular, but not suppurating. These are being treated by palliative measures.

(To be Continued.)

A PLEA FOR EFFICIENT LEGISLATION REGULATING MEDICAL PRACTICE.

BY PERRY H. MILLARD, M. D., OF ST. PAUL.

During the last decade no question in medical sociology has attracted greater attention than medical education. The requirements of our colleges not being upon a par with those of other countries, nor with other departments of education in this country, it was but natural that the profession as a whole, the medical press, and organized bodies of medical men, should join in a demand for needed reforms. During the formative period of our history it is but natural that abuses should have arisen in methods of education and obtain a firm rooting. A spirit of criticism exists that will not subside pending the definite determination of a question of such vital interest to the profession of the country.

As a nation during the first century of our history we have established a system of common school education that challenges the admiration of the civilized world. It is a subject of regret, however, that in certain advanced lines of education our methods have proven most defective. This is true of medical education; a system having secured foothold with us that is indeed anomalous.

Having no support other than the fees of students; without university or college connection; without support from the State, generally accorded other systems of education; without restraining legislative enactments; without laws regulating the granting of charters for purposes of medical instruction; it is indeed little wonder that at the end of the first century of our history as a nation, chaos should reign supreme.

The agitation of the question of medical education is bearing fruit however, in that a majority of the schools situated in the Northern States demand at the present time

Read before the American Academy of Medicine at Baltimore, May 6, 1895.

evidence of preliminary fitness before matriculation, and that in a period of five years all colleges known to the writer have extended the period of time of study, with a change of the minimum length of term from five to six months. After the present year every medical school of recognized standing will require attendance upon four courses of lectures in different years, of six months' duration each course, before conferring the degree of M. D. The reforms thus far accomplished have only been secured in the face of determined opposition at the hands of the representatives of the low grade institutions. Future opposition will result in disaster to the participants. Professional sentiment is decidedly with those schools now operating under the advanced curricula. This is particularly manifested by the increased number of matriculates in the last three years at schools operating under the four years' course. The fiscal matriculation at the University of Pennsylvania and Columbia is, approximately, eight hundred, Harvard five hundred, and others in proportion; while that of the recognized low-grade institutions have sensibly fallen off.

Notwithstanding the trend of public opinion, we are firmly of the conviction that our only safety consists in the establishment of efficient legislative acts in substantially every State. The high-grade schools are undergoing a period of evolution and are determined to inaugurate greater system in methods of work; with low-grade schools little evidence is at our command pointing to improvement.

The elevation of the standard of requirements in the latter class of schools has seemingly been entirely in response to the requirements of the respective State Boards of Medical Examiners.

The indifference of the profession to methods of medical education has been far reaching in its pernicious influences. Blinded by our own shortcomings we did not awaken to a realization of our environment until our interests were greatly jeopardized. We found ourselves drifting, in the estimation of both the public and profession, towards a condition of professional inefficiency, not unlike that of French medicine in the seventeenth century, so graphically described by Moliere. One of the greatest evils of our system was the flooding of our ranks with a horde of poorly-educated practitioners far in excess of our legitimate demands. The latter assertion is convincingly illustrated by the statistics gleaned from the recent excellent paper of Professor Pepper on Medical Education, affording comparative statistics relating to the proportion of practitioners to the population in different countries of the globe.

TABLE INDICATING PROPORTION OF PHYSICIANS TO THE POPULATION.

Austro-Hungarian Empire	1 to 3857
Belgium	1 to 2841
France	1 to 2666
German Empire	1 to 3038
Italy	1 to 3536
Netherlands	1 to 2484
Norway	1 to 3961
Russia	1 to 8551
Spain	1 to 3375
United States	1 to 500

The number of medical colleges indicates a similar disproportion.

NUMBER OF MEDICAL COLLEGES TO THE POPULATION.

Austro-Hungarian Empire	1 to 5,153,917
Belgium	1 to 1,534,111
Brazil	1 to 7,001,167
Canada	1 to 3,336,877
Chile	1 to 2,887,552
France	1 to 5,477,591
German Empire	1 to 2,471,923
Great Britain	1 to 2,358,767
Italy	1 to 1,445,109
Netherlands	1 to 660,249
Norway	1 to 1,988,771
Sweden	1 to 1,600,917
Russia	1 to 14,403,317
Spain	1 to 1,950,027
United States	1 to 440,151

It will be observed from the above that the proportion of practitioners and the number of schools are greatly in excess of other countries. Medical colleges in foreign countries are likewise independent financially, being, as a rule, directly supported by the state or possessing a direct university connection.

An investigation of this subject reveals beyond the possibility of suc-

cessful controversion that the most efficient profession is found in those countries protected by efficient legislation; while a correspondingly low standard of professional fitness exists in countries not similarly protected.

At one time considerable opposition existed to the regulation of medical practice by legislative enactments. With the defeat of attempts to destroy the effects of this form of legislation by litigation and the moral support afforded by the recent decision of the Supreme Court of the United States and the Supreme Courts of the several States, as well as the apparent benefits from the successful operations of the law in a large number of States, it is pleasing to note a decided change of sentiment in favor of this form of legislation .

The existing opposition to this form of legislation is greatly disappearing, being greatly confined at present to the charlatan, the faculties of a few of our low grade schools and the public press. We can trace the existence of statutes regulating medical practice from the thirteenth century; in the year 1237 licenses were only obtainable in Italy upon attendance at medical lectures for a period of five years, with preliminary entrance requirements demanding three years' work in philosophy.

The first degrees in medicine were evidently conferred in Italy in 1384. Laws regulating medical practice have existed in all civilized countries for many centuries. It is unfortunate that in this country the diploma has been given a legal interpretation; in foreign countries it is simply an evidence of scientific value. With the advent of statutes regulating medical practice this custom upon the part of the courts is becoming abrogated. We cannot but conclude that in the older countries we have a superior profession in point of intelligence, with a more desirable environment; while with us we have, as a whole, men somewhat inferior in their preliminary training, a number triple that of any other country and a professional environment most undesirable.

The essentials of efficient medical legislation will incorporate the following features:

(1) The adoption of more rigid rules governing the admission of students to medical schools.

(2) The determination of the applicant's fitness to practice by an examination upon all the branches of medicine.

(3) The right to refuse to revoke licenses for unprofessional or dishonorable conduct.

(4) An adequate penalty for violation of the provisions of this variety of legislation.

(5) The boards of examiners to be appointed by the Governor, with proportionate representation by different schools of practice. In support of demands for an adequate entrance requirement it is conceded that medicine is now more nearly practiced from a scientific basis than at any time in its history. Without adequate preliminary fitness the broad field cannot be grasped nor its practice intrusted to persons without well-trained minds.

Persons contemplating medicine as an avocation should give the scientific branches particular attention in preparation. A thorough course in the scientific department of our better equipped colleges or universities will permit of the successful accomplishment of the course now provided in the four years' curricula in a period of three years. I fully concur in the position taken by Professor Vaughan, however, in that the classical course does not prepare the student in a manner that he can safely abridge the work now required in the four years' curricula. The necessity of a thorough college training is more apparent now than at any previous time. While an immediate attempt, looking to the demand as above suggested, would probably meet with defeat, I am of opinion, however, that by concert of action we can secure the adoption at this time of an elevation of the standard of fitness, requiring a college or university matriculation, or its equivalent, of all students wishing to commence the study of medcine. If the student cannot furnish a matriculation ticket from a recognized college

or university, he or she should be required to undergo an examination that would admit to such course.

Under existing relations we cannot safely entrust this examination to the representatives of the teaching body. Except in a few of our high-grade schools the entrance examination has been a farce as at present conducted. The factors leading to this condition are the same as outlined earlier in this paper. It is the result of college competition with an unnecessary multiplication, in recent years, of the number of teaching bodies. It is my judgment, based upon a somewhat varied and extended experience, that a majority of the schools in this country exist to serve the personal interests of the respective faculties rather than to serve the legitimate demands of the people. About 25 per cent. of our schools have a matriculation of less than 60 pupils.

The determination of the fitness of the student to commence the study of medicine should be placed in the hands of a body of men entirely disinterested. I know of no body better qualified to superintend the execution of this important trust than a State board of medical examiners. If not such a body, then a committee composed of members of a faculty of a college or university.

The minimum of entrance requirements should be uniform between the different States. Under the operations of the New York law regulating the examination of students commencing the study of medicine much good is being accomplished. I desire to urge upon the profession the necessity of provisions in future acts looking to a rigid protection of the gateway to the study of medicine.

Having submitted satisfactory evidence of preliminary fitness, only such persons should be admitted to undergo the professional test as have received their courses of professional education at schools of medicine whose curricula of requirements are acceptable to the respective boards. A minimum of requirements, both as to time and teaching facilities, are as essential in measuring professional fitness as it is for similar purposes in universities, colleges and our public school system. A school should not be recognized unless it is working under a minimum that will assure the graduation of a class of persons that can safely be entrusted with the care of the sick. In arriving at a conclusion upon this most important function I desire to particularly impress upon the members of these boards the fact that medicine as at present understood and practiced is radically different from that of a few years ago. To comprehend requires years of study and a training in laboratory methods and surgical technique that can only be grasped when afforded by a person trained in methods of medical pedagogy. The clinical and laboratory facilities of many of our schools are shamefully inadequate. Several colleges known to the writer having operated for years with substantially no assets. It is the duty of each board to inquire fully into the facilities of each school represented by graduates who are applicants for degrees.

Having determined upon the fitness of the school to afford satisfactory courses of medical instruction, applicants holding degrees from such institutions should be admitted and a further test of fitness demanded by requiring an examination upon all the recognized branches of medicine. These examinations should be conducted by number, be scientific and of sufficient severity to assure the public a thoroughly educated profession. Students from the respective schools of practice should undergo an examination upon the same questions, no necessity existing for questions not primary in character.

Licenses should not be refused or revoked for other than gross unprofessional or dishonorable conduct. In criminal cases it is not well to anticipate the processes of criminal law. The latter feature of our legislation has been instrumental in protecting the people from the professional charlatan in several States. Its provisions should be incorporated in all statutes regulating medical practice.

(To be Continued.)

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ELECTRICITY AS A DEATH-DEALING AGENT.

The recent electrocutions in New York State have awakened renewed interest in the question whether real death is produced by the shock of the pathologist's knife, and the New York Medical Journal takes up the subject in the following editorial:

The account which elsewhere in this issue we reprint from last Saturday's Sun of the resuscitation of a man who had been rendered unconscious and apparently lifeless by a shock from an electro dynamo, and remained in a state of apparent death for close on to an hour, whatever allowance may have to be made for exaggeration, is calculated to give rise to reflection. In the first place, it makes us hope that the victims of lightning-stroke may in a fair proportion of instances be brought back to life if timely and well-executed measures are brought into play, especially artificial movements of respiration and rhythmical tractions on the tongue. M. d'Arsonval has, if we are not mistaken, laid great stress on the possibility of such efforts being successful and on the duty of resorting to them, and it seems that his teaching has made such an impression even on men outside the medical profession as to lead the officers of the electrical company in Rochester, on whose premises the resuscitation referred to is reported to have occurred, to have their workmen drilled in the manipulations recommended by him. If only an occasional life is saved by following M. d'Arsonval's precepts the result will be a decided gain to humanity, but if success is achieved in a few cases modifications of the procedures or greater precision in carrying them out will doubtless soon raise the proportion of successful instances to the maximum attainable.

Another thought that will inevitably rise up before physicians is not so gratifying; it is that of the heightened probability given by the occurrence to the theory that men who are supposed to be put to death by electricity, under judicial sentence, in the State of New York, are simply shocked into a condition of suspended animation that slowly ends in real death, even if the shocking event does not sometimes occur of their final taking off being accomplished by the autopsy that is so promptly performed. It is a revolting thought, but it is one that our humanity dare not shirk. It seems to us that the alleged advantages of electrical execution will have to be reconsidered most seriously. This journal has never admitted their reality, and now more than ever we feel it our duty to call upon the law-making power to use all diligence to ascertain if it has not made a horrid mistake while acting under the false light of supposed progress. If the death penalty must be inflicted, by all means let it be done by the executioner in the course of his duty, and not left to be done unwittingly by the pathologist. We make no statement that it ever has been done by him, but we see not how to escape the doubt lest it may have been, or lest it may be again if the practice of making over-prompt dissec-

tions of executed criminals is kept up. The whole matter of the manner of conducting executions in the State of New York ought, in our opinion, to be most carefully systematized by a body of men possessed of the necessary knowledge and clothed with sufficient authority.

DECREASE OF TUBERCULOSIS IN PRUSSIA.

Tuberculosis has been the subject of early and more vigorous efforts to check its transmission in Prussia than elsewhere, as is natural, considering that Dr. Koch is a Berlin professor. The result is that while from 1875 to 1887, before his discovery, the deaths from tubercle or consumption were 31 in 10,000, since 1887 there has been a gradual decrease to 25 in 10,000. Elsewhere this decrease has not taken place. Prussian prisons and insane asylums show a reduction in their death rate from tuberculosis since careful precautions were adopted. The death rate from this cause among religious nursing orders was in 1881-2 114 per 10,000. In 1893-4 it had dropped to 67, almost half. Facts like these show the absolute necessity of careful precautions for destroying the sputa of consumptive patients. Rigorous care in this direction would greatly decrease a disease to which a large proportion of deaths are due.

THE TREATMENT OF BURNS WITH THIOL.

In the May number of La Clinique there is an article on this subject in which the writer says that according to A. Bilder, of Berlin, thiol is one of the best applications in the treatment of burns of all degrees. Bilder first washes the burned part with a weak solution of corrosive sublimate and then removes the cuticle hanging loose as the remnants of ruptured blisters, taking care not to touch those of which the walls are still intact. After dusting the burn with powdered boric acid, the entire surface of the burned region and the healthy skin around it are painted with a solution of equal parts of thiol and water; finally, a layer of greased cotton is laid on the burn and kept in place with a bandage. Thiol allays the pain very rapidly and arrests the hyperemia of the skin. Part of the contents of the blisters is absorbed and the rest becomes dry in the form of semi-transparent, amber-colored crusts which are easily detached, leaving a completely healthy skin. At the end of eight days the dressing is removed. The rapidity of the cure varies according to the degree of the burn. In burns of the first and second degrees it is generally rapid. In those of the third degree the cicatrices which are formed under the dressing of thiol are smooth and show no tendency to retraction.

A RECOVERY FROM A TREMENDOUS ELECTRICAL SHOCK.

On June 21 the foreman of the Rochester gas and electricity was accidentally exposed for some seconds to an electric current said to have been of a strength of 2899 volts. Life was apparently destroyed by the shock, but efforts at resuscitation were at once commenced, and after 45 minutes' employment of artificial respiration and other measures the first sign of life was noticed. Then natural breathing began and in half an hour more he opened his eyes and recognized those about him. His body was considerably burned, but otherwise the patient is now said to be quite well.

CAUSES OF SUDDEN DEATH.

The causes of sudden death as given by Tidy are as follows:

1. Disease of the heart (especially fatty and brown degeneration), aortic regurgitation, interstitial abscess, rupture of the heart or of its valves, diseases of the pericardium.

2. Diseases of the blood-vessels (especially aneurism and thrombosis), large effusions of blood into the brain or its membranes (cerebral and meningeal apoplexy).

4. Pulmonary apoplexy and hematothorax.

5. Sudden bursting of visceral abscesses.

6. Ulcers of the stomach, duode-

num or other parts of the alimentary canal.

7. Extra-uterine pregnancy, peri- and retro-uterine hematocele, rupture of the uterus.

8. Rupture of the urinary bladder or of the gall-bladder.

9. Cholera and certain zymotic diseases.

10. Large draughts of cold water taken when heated.

11. Mental emotions.

12. Accidental swallowing of foreign bodies.

Electro-Therapeutics.

IN CHARGE OF
DR. S. H. MONELL, New York.

THERAPEUTIC ACTION OF HIGH FREQUENCY CURRENTS.

Interesting observations upon certain phenomena of high tension, high frequency currents have been made by Tesla, Thompson and others. The therapeutic effects of these currents are equally interesting. Any physician who has a static machine and whose expertness is sufficient to enable him to adopt it to a variety of applications can test the efficacy of high frequency currents without the aid of other apparatus.

The following remarks have been given out by Apostoli and Berlioz. It will be noted that they confined the method of administration to a single general form. Far more comprehensive results are obtainable by a diversity of method in applying any form of electric current than by adhering to a single method. This is equally true of the high frequency form tested by Apostoli and referred to in the present report:

"We have been engaged during the past year in trying upon a number of our patients the action of high frequency alternating currents generated in the human body by induction with a view to arriving at the clinical demonstration of M. d'Arsonval's physiological discoveries in this direction.

"Localized applications of these same currents to dermatology have already been made by Dr. Oudin, but their influence on the system generally, under the most diverse pathological conditions, had not been demonstrated at all. With this view we proceeded, empirically applying almose uniformally the same treatment which consisted in inclosing the patient in M. d'Arsonval's large solenoid for a period of 15 to 30 minutes each time and, as far as possible, every day. We took particular care to eliminate all other influences, either of special diet or medicine, subjecting our patients to this treatment only.

From the 20th of January, 1894, to March, 1895, 75 patients (34 private patients and 41 hospital cases) have been treated in this manner, and during the same period 267 examinations of urine have been carefully made by M. Berlioz.

The total number of times that these patients were treated was 2446.

We will now give the results, which have been faithfully recorded, whether positive or negative.

(A)—NEGATIVE RESULTS.

Certain forms of hysteria and of localized neuralgia, such, for instance, as neuralgia of the radial type proved absolutely refractory and derived no benefit from this treatment.

The examination of the urine of these patients, which was made a certain number of times during the course of these applications, showed besides that there had been no appreciable change in the composition of the urine before and after the treatment.

(B)—POSITIVE RESULTS.

The greater number of patients that derived a marked benefit from this treatment were those suffering from nutritive disorders, arthritis, gout, rheumatism, glycosuria, etc.

Nearly all of those showed a marked improvement; but those who derived the greatest benefit were arthritic subjects with articular or neuralgic symptoms. During the first trials, even before any apparent local influence or action on the urinary

secretion was observed, the general health seemed to be beneficially influenced, and we noted from day to day the following general symptomatic improvements, making allowances for the slight differences of each particular case:

Restoration of strength, return of appetite, return of sleep, increased cheerfulness and energy for work, the quieting of certain nervous symptoms, more ease in walking, appearance improved, etc.

Subsequently, local troubles, either painful or involving loss of power, were gradually amended; thus a patient, who had been reduced to almost complete powerlessness by coxofemoral arthitis, regained the use of her legs. Another who had been, through sharp pains, unable to close her hand, completely regained the use of it, etc.

Simultaneously with this symptomatic improvement the examination of the urine showed that the diuresis was becoming more satisfactory and that the organic matter was more easily eliminated. Combustion was increased, as was shown by the diminution in the amount of uric acid, whilst the proportion of urea rose. The ratio between these two substances, which before treatment was very high, decreased gradually until it reached the mean proportion of one-fortieth.

The elimination of the mineral elements was also influenced, but in a less evident manner.

We will also mention, reserving to ourselves the right, however, to complete our first results on other patients of the same class, that, in three diabetic subjects, the quantity of sugar diminished considerably, even to the extent of disappearing altogether after a certain number of trials, without any other treatment. In short, the numerous facts that we have observed during the last year place us now in a position to support by a clinical confirmation M. d'Arsonval's physiological discoveries relating to the action of high frequency alternating currents generated in the tissues by induction.

These currents have a powerful influence on the nutritive faculties, and on this account they constitute a mode of treatment of the highest value in a large number of functional disorders caused by inaction or perversion of the nutritive processes.

Medicine.

IN CHARGE OF
DR. E. W. BING, Chester, Pa.

DIGESTION IN YOUNG CHILDREN.

The commnuication of Huebner on the feeding of young children gives a special interest to the chapter which Ballantyne devotes to his book, to the physiology of the digestive system in children.

He says: "Digestion in the child differs from that of the adult, so that the problem often becomes very difficult. If we were in possession of a complete knowledge of the chemical phenomena taking place in digestion in children we would be in a better position to treat cases of disorder of this function.

Ballantyne studies successively digeston in the mouth, stomach and intestines.

Buccal digestion.—During the first six or seven months the food is hardly at all modified in the mouth, There being no teeth, there is consequently no mastication to speak of, and as the food usually consists of milk the absence of teeth is immaterial.

The salivary secretions are almost absent in the first weeks; until the third month there is little salivary secretion, but from this time the buecal glands are active.

The saliva of the child, like that of the adult, has the peculiar action on starch to an extent. During the first months there is not ptyaline sufficient to transform starch into dextrine and glucose, although the action continues in the stomach.

As the child grows the salivary secretions have an increased action, and after the eruption of the teeth the process is about the same as in the adult.

Stomach digestion.—The capacity

of the stomach is a question of importance. During the first months it increases rapidly and thus more slowly. Frolowsky says the capacity at birth is about one ounce. If this is represented by the figure 1 the capacity will 2 1-2 in the fourth week; 3 1-5 in the eighth week; 3 1-3 in the 12th week; 3 3-5 in the 20th week. Snitzkin says the capacity is in direct ratio of the weight of the child.

Hydrochloric and pepsin.—The former only appears about one-half hour after taking of food. In the absence of it the stomach contains lactic acid and other organic acids. When the child is taking milk alone this acid is furnished in large quantities, and its presence is due probably to a special ferment.

Reichstein has shown that in digestion in adults, a few minutes after taking milk, clots of caseine are found in the stomach with a certain quantity of parapeptones and traces of lactic acid. Starting from this lactic acid increases and then HCL and peptones take its place, digesting the coagula of caseine and parapeptones. When milk is given boiled the process is quickened, and this is also the case in presence of water. This shows the necessity of adding water to the food of infants. The result of these transformations is the production if chyle, which contains an acid liquid, fats and fatty acids not yet transformed.

In children nourished at the breast few bacteria are found, but in those fed artificially germs are numerous.

Hepatic secretion.—The large size of the liver in young children is a proof that it plays an important part in digestion. Its functions are but imperfectly known, however. It is probable that the bile acts in children in much the same way in adults.

The pancreatic secretion contains three ferments—trypson, steapepsin and amylopsine.

Intestinal digestion.—The secretions of the glands of Brunner and Luberkuhn in addition to those of the liver and pancreatic convert the chyine into chyle. Peptones, sugars and fats pass easily into the blood current, probably because the glandular tissue is so abundant. The mineral salts are not well absorbed, as is shown by the fact that the stools contain the greater part of the amount ingested. The nitrogenous elements, on the contrary, are so well absorbed that no traces of them exist in the stools.

Rectal absorption in the child.—No digestive process occurs in the rectum, but the absorption of what has escaped the upper portion of the intestines still goes on. Albumenoids and fats to an extent are absorbed, but of course the proportion as compared with the other parts of the tract is small.

Feces—Defacation is frequent in infants. During the first week three or four stools a day are normal, and at the end of the second year there are usually two stools a day. After this age there is generally but one in the 24 hours; so that to decide whether there is diarrhea or constipation it is requisite to recall to mind the normal number of stools at the given age. The appearance and decomposition of the stools vary also according to age. In the newborn child during the first two or three days the stools consist of the meconium with which the intestines are filled at birth. This is made up of the hepatic, pancreatic and intestinal secretions, and by-substances swallowed by the child, as ammotic liquor, hairs, sebaceous matter. It is always free from putrefaction products, as indol and phenol, and is devoid of bacteria. These, however soon make an appearance after birth, but differ altogether from those bacteria resulting from the digestion of milk, and they disappear as soon as the digestion of milk commences. The stools of children fed on milk exclusively are of a pale yellow color, semi-liquid and of a stale odor. They contain from 84 to 86 per cent. of water. In health they contain neither tyrosine, indol, phenol nor scatol, but they contain bacteria, principally the bacteriun lactis and B coli. If other food than milk is taken other bacteria are present. The bacteriological diagnosis of stools is at present impracticable, owing to the diversity of opinion of different authors.

TREATMENT OF AN ATTACK OF ACUTE GOUT.

External treatment.—Avoid blisters, scarifications, leeches, cold; Tr iodine collodion friction or massage. Use rest with elevation, culmative liniments, cottons. The liniment should contain some one or more of the narcotics.

Internal treatment.—The remedy par excellence is colchicum. If there is gastric disturbances an anticathartic should be given, which in some cases is superseded by the pains. If dysuria is present alkaline water is indicated.—Licorchi.

IRRITATION OF THE BLADDER CAUSED BY THE USE OF LARGE DOSES OF BICARBONATE OF SODA.

A physician took for a month 20 grammes of soda a day and during the next month 25 grammes. At the end of the time he showed intense cystitis. After stopping the use of the drug he was relieved in two days.—La France Med.

In gonorrheal rheumatism Balzer says that salicylate soda and antipyrine are often useless, and it is necessary to fall back on local treatment. Of these the author prefers turpentine baths combined with immobilization, which he had always found to succeed. He mixes the turpentine with soap and adds it to the bath.—Courier Medical.

TREATMENT OF HEMORRHOIDS BY IODOFORMIZED ETHER AND MASSAGE.

Beck has tried this in eight cases. After using an enema he inserts a suppository of morphine and cocaine. He then injects into the connective tissue around the piles some drops of a solution of iodoform in ether. These produce a reaction in the connective tissue, which causes the absorption of the pile. With piles of moderate size cure is quickly obtained without the patient going to bed. In this connection we may recall Manley's procedure, which consists in massage of each pile.

EXTRACTS FROM

German Exchanges

IN CHARGE OF

DR. J. A. KRUG, Philadelphia, Pa.

AUTOSCOPY OF THE LARYNX AND TRACHEA.

Dr. Alfred Kirstein, in Berliner Klimsche Wochenshrift, reports of a new method of examining the larynx without head-mirror, under the above title, as follows: Pharynx and back part of epiglottis is cocainized with a 20 per cent. solution of cocaine. Patient takes off the clothing of the upper part of the body and either lays horizontal on the back with the head hanging over the edge of the table, or he sits upright, with the head bent strongly backwards. In the open mouth, with protruding tongue, the Doctor puts in the autoscope, consisting of a short, thick tube, running out in a half cylinder, which connects with a Kaspar's electroscope at a right angle. The electric contact is closed and the insertion of the instrument follows under light. The electroscope, which serves as handle, he takes in the left hand, so that the free end, which is connected with the light, stands upwards, passes with the leaf-formed end of the half cylinder, with the convex part on the tongue way back into the mouth up to the cartilages of Santorini and make a lever movement, by which the tongue is pressed forward and the epiglottis is pressed up and the view of the contents of the larynx is perfect. Dr. Kirstein is of the opinion that operations on the larynx and vocal cords under this method are much easier of execution than under the old method; the only obstacle in some patients would be the necessity of laying of the clothing on the upper part of the body.

SUBLIMATE INJECTIONS.

G. Lewin (Berl. Klin. Woch., 1895, No. 14) concludes his remarks on this subject. As regards skin eruptions, he knows of no cases in which any serious cutaneous affection has fol-

lowed the injection of soluble or insoluble mercurial preparations. Severe and even fatal skin complications have followed inunction; eczema is very common. In his method of sublimate injections 0.012 g. is injected daily, whereas insoluble preparations are injected every five to ten days. The smaller number of injections is only an illusionary advantage. With inunction patients have been known to rub in more than the prescribed amount with even serious results. With the sublimate injections the treatment may be interrupted, whether such interruption is desirable owing to the supervention of some acute infective illnesses or to other causes. This is not so easily effected with insoluble preparations. If the syphilitic manifestations become threatening, the treatment may be forced and the sublimate injections given even thrice daily, whereas with inunction and the injection of insoluble preparations increased absorption cannot be depended upon. The treatment with insoluble preparations is not shorter, but frequently longer. The author then discusses the subject of relapses and the difficulties attending the estimation of relapses. Among those at present frequenting his clinic, five out of 120 men have had malignant relapses, and of these one had been treated with sublimate injections, three with insoluble preparations, and one with potassium iodide. Among 195 women there were also four such cases, and two had been treated with inunction, one with subcutaneous injections and one had not been treated. The author refers to 15 recorded cases of death after the injection of insoluble preparations. He also gives details of some deaths connected with mercurial inunction, mostly due to colitis. He is of opinion that the injection of insoluble preparations should be abandoned. He knows of no case in which death followed sublimate injections.

NEW GROWTH IN THE HEART.

Pavlowsky (Berl. klin. Woch., May 13, 1895) concludes a study of this subject. The obstruction to the circulation in his case was caused by a pedunculated tumor (myxoma) in the auricle, which hindered the closure of the mitral valve. If the heart was placed in a vertical position, the tumor pressed against the venous openings, and embarrassed the circulation in a more marked degree; hence the patient's objection to the sitting posture. The hemoptysis and hemorrhagic infarcts were the result of the engorged pulmonary circulation. No explanation was found for the periodic attacks of paresis seen during life except general anemia of the brain, and the presence of fluid in the cerebral ventricles and about the base of the brain; there was no embolism or hemorrhage. The author gives an exhaustive account of the literature of the subject. Of 11 cases, including his own, of which details are given, six occurred in men and five in women. The ages of four women varied from 55 to 80, whereas in the fifth it was only 18 years. Of the six men three were between 21 and 27, and three between 42 and 54. The symptoms consist of cough, hemoptysis, dropsy, cyanosis, etc., all due to obstruction of the circulation, but no clinical picture applicable to all cases can be deduced. In six cases also, including the author's, the growth projected through the mitral orifice into the ventricle.

PERMANENT EFFECT OF HYDRASTININ IN METRORRHAGIA.

Kallmorgen (Zeit. f. Geburtsh, u. Gynak., May 29, 1894) remarks that, while no doubt can remain as to the value of hydrastinin in metrorrhagia, reports are hitherto wanting as to the permanency of the results. He kept 86 patients of the Berlin Gynecological Polyclinic under observation during one and three-quarters to two and one-quarter years after treatment with the drug. The best results were obtained in cases of simple menorrhagia and of hemorrhage connected with retro-uterine hematocele, previous abortion, or disease of the appendages. The success was less marked in chronic endometritis, very

doubtful in hemorrhage during pregnancy or due to myoma, and nil in carcinoma.

Miscellany.

THE WORK AND THE PAY.

An able editorial in the New York Medical Record of June 29, under the above title, gives a comparatively correct idea of the reason so many persons are attracted to the medical profession as a life work.

The popularity of medicine as a profession is always emphasized at this season by the number of graduates that make their bow with diplomas in hand before large and appreciative audiences on the numerous commencement occasions of the different medical departments of our universities. In fact, the medical graduates outnumber all the others. That the medical departments are the largest in most of the institutions of learning requires no demonstration. It is not difficult to explain why this is so, for no profession offers in its practical pursuit, or rather its conscientious study, better opportunities for substantial mental culture, greater satisfaction in its work, or a wider independence of opinion in the broad and liberal interpretation of its principles. But while it is the grandest of professions, it is certainly the meanest of trades. If the work is done for the work's sake, there is a continuous and ever-increasing satisfaction in its pursuit. It is this, indeed, that lends fascination to drudgery and contentment to comparative impecuniosity. All cannot be great physicians, but there is no reason why all cannot be good ones. The latter is the only real incentive for the young man who is willing to take the exceptional chance of making a trifle more than a good living. The rewards are not to be measured on any conventional money basis. To such as imagine otherwise there is left nothing but disappointment.

Not long ago we took occasion to study the question of the average income of the physician, and, although prepared in some respect for the answer, we were, nevertheless, surprised at the figure. Notwithstanding the amount compared favorably with that received by the average minister or lawyer, it was much below what might have been expected from the boasted returns of would-be prosperous practitioners. The difficulties in the way were obvious enough, but were in a measure offset by the study of certain known standards of available business with possible and actual returns therefrom. Comparatively few in any city or district rendered themselves liable to the threatened income tax. The average yearly income for the country town was from $1500 to $1800, while that for the city was scarcely above $2000. Allowance was duly made for bad debts, the latter averaging from 30 to 50 per cent. of all gross earnings.

In large cities there were a goodly number with an income ranging from $3000 to $5000, but beyond these figures, in the averages from $5000 to $25,000, there were very few, indeed; while above these amounts there were scarcely enough to count on the fingers of one hand. Although high fees in law are far beyond those in medicine, the average lawyer more than strikes a comparative compensation at the other end of the line. The law of average is as certainly balanced between these two extremes as is any purely mathematical equation. The comfort in such a contemplation is that there are more doctors than lawyers who are doing ordinarily well. In the average way, the physician has the better chance of making a fair living.

It is the ordinary every-day fee in the usual and steady run of regular business that gives the doctor his real dependence, rather than the occasional larger amount for an extraordinary service. Surgical operations, while they command higher rates, are comparatively few and far between, and are always offset by the lavish expenditure of time and work in the hospitals for the necessary experience and requisite repu-

tation for such business. But worse than all, for purposes of income the very means used to obtain skill directly militate against the possibility of remunerative returns in the end. Most of the important operations are done in hospitals for nothing and for the sake of the practice; and even the paying classes take advantage, eagerly and persistently, of the situation. This will be more and more the case so long as our hospitals advertise free medical and surgical treatment and our millionaire clinics gather in the pay patient under the guise of clinical material.

From the standpoint of money-getting the doctor has by no means an easy road to wealth. The only comfort is that he is satisfied with little, and is, therefore, comparatively rich; but best of all his work always carries with it a hearty taste, and its steady progress the fuller fruition of a lofty purpose.

GRIPPE IN THE PUERPERAL CONDITION.

At a recent meeting of the Congres de la Societe Obstetricale de France, a report of which appears in the Progres Medical for May 25, M. Queriel, of Marseilles, reported 35 cases of grippe occurring in puerperal women. In all the cases there had been pulmonary localizations, and in two broncho-pneumonia. No deaths had occurred. Eleven of the women had been confined before term and the others at term. The membranes had been ruptured four times during the efforts made in coughing. One patient, who had undergone symphysiotomy, had been attacked with pneumonia during her lying in; another had had gastric symptoms and her child had had erysipelas. There had not been a single case of suppuration. M. Queirel had used corrosive sublimate for vaginal and uterine injections, but he did not practice the uterine injections unless the temperature rose. Perhaps it was owing to this procedure that no cases of infection had occurred.

M. Gaulard had also had an epidemic of grippe in his clinic at Lille, but, he said, he had taken no particular care in regard to the genital organs; he had simply used antipyrine and in three or four days the patients had recovered. M. Queirel said that he had observed particular syndromes. In certain cases there had seemed to be an outbreak of smallpox; in others, angina, etc., but there had never been anything observed affecting the genital organs.

VARIETY IN DIET.

A number of facts conspire to throw a somewhat new light on questions of dietetics, or at least to show that these problems are more complex than they have been by some supposed. It has been usual to speak of a "mixed diet," meaning thereby one composed in part of animal and in part of vegetable food, one containing proteids, fats and carbohydrates, approximately in such proportion as they are required by the organism; but when we see the effect upon disease produced by very small quantities of certain selected portions of animals commonly used as food, such as thyroid gland, suprarenal gland and bone marrow, the suspicion arises that these are but the more pronounced expressions of a widespread principle, and that such marked differences in therapeutic effect between certain organs may be associated with similar differences in nutritional value between the various portions and kinds of meat which we consume. We may surmise too that the modes of preparation may have a considerable influence, and that while good cooking may be, as it should be, a preparation for and an aid to digestion, certain processes in cooking may do more harm to the nutritional value of our food than is explained by the mere change in its physical properties, the hardness, the toughness, etc., which they produce. The destruction of the anti-scorbutic properties of milk by condensing, overcooking and sterilization, is a case in point, and we commend to the British farmer the interesting question whether and how far the prolonged freezing of meat may interfere with its finer nutritional

value. Healthy men, who have a great reserve of digestive power, can derive nutriment from almost any food, but for people of feebler frame a mixed diet must mean one in which variety of substances exists, of whose nature and of whose differences inter se we as yet know nothing. The healthy man, by taking plenty, finds among it what he wants, but until we know much more than we do of the varied value of different foods and different modes of cooking, we must at least afford variety to our invalids, and protect them from a monotony in diet which may perchance be debarring them from the one thing needful for their nutrition.—British Medical Journal.

ACCOUCHEMENT FORCE.

Dr. J. Henry Carstens, in the American Journal of Obstetrics, March, 1895, calls attention again to a method of accomplishing the emptying of the uterus in abortions, or of producing abortion, that he has employed for years, and described before under the name of "Accouchement Force."

Having determined on the production of an abortion (which, he says, should not be done till after consultation), he proceeds by inducing profound chloroform anesthesia, then dilating the cervix with some strong instrument, as the Erlanger-Goodell dilator, then introducing the finger or fingers through the cervix, removing the contents of the womb and cleaning its cavity of all shreds and debris by the curette, after which an application of pure carbolic acid is made to the interior.

The operation lasts, in his hands, but 15 minutes in many cases, and is universally followed by good results.

After the seventh month this procedure is modified by dilating the cervix first with steel sounds until large enough to admit a rubber bag (Barnes' dilators for instance), which is filled with air and dilatation completed in that manner.

He asserts that the operation is absolutely safe if aseptic and antiseptic precautions are observed; and claims, as arguments in its favor, that the delivery is accomplished quickly, the woman suffers no pain, there is no anxiety and worry for the physician, and that there is no staying up at night, but that the time may be selected with reference to light, convenience, etc.

THE TREATMENT OF CEREBRAL SYPHILIS.

The treatment of cerebral syphilis is never really satisfactory, and one can never be certain whether the administration of specific remedies will be attended with success or not. Bruni has recorded an interesting case, which he considers as one of undoubted cerebral syphilis. The patient, a man aged 25, was seized with right-sided convulsions, recurring one to three times a day; he had become syphilized four years previously. There was no fever and the pulse was regular, and Bruni considered the case to be one of Jacksonian epilepsy dependent on a gumma of the left Rolandic area. At first the patient was treated by intra-muscular injections of mercury, and iodide of potassium was given by the mouth. There was no improvement by the seventh day, and the treatment was therefore changed to daily intravenous injection of a solution of corrosive sublimate. The injection was made 16 times, commencing with three, and increasing steadily up to six milligrammes, after which mercurial inunction was substituted. The injection of corrosive sublimate was made into the left median cephalic vein, and after the second injection the fits ceased and the head pain disappeared. Bruni considers this method of intravenous injection "useful and even necessary" in cases in which other mercurial treatment has failed in severe cerebral syphilis, or where patients cannot stand large doses of mercury.—Med. T. and H. C.

Bromide and strontium is being advocated in the treatment of epilepsy and chorea. There is an absence of acne rash and less tendency to somnolency than with other bromide salts. It should be given in doses of 30 grains two or three times a day.

The exhibition of eserine at the same time is said to increase the beneficial action.

CASTRATION UNDER COCAINE ANESTHESIA.

Bryson (N. Y. Med. Journ., April 27, 1895) reports a case of complete castration for prostatic hypertrophy on a patient aged 74. As the condition of the heart and kidneys contraindicated general anesthesia by chloroform or ether the following steps were taken to avoid giving pain: The entire scrotal sac was seized by the left hand as high up as possible, and manipulated for a sufficient time to relax the dartos and cremasters, after which a strong rubber band was passed above the hand around the root of the sac, close to the peno-scrotal and perineo-scrotal angles. This band was drawn tight enough to strangulate the vessels of the scrotum and cord. The line of incision on the anterior surface of each sac was now injected with a four per cent. sterilized solution of cocaine, four punctures being made, and half a drachm of the solution used for each side. The needle was then inserted, half an inch below the constricting band, into the central part of each cord, and five minims of the same solution were thrown in. The scrotal punctures caused some pain, but the injection of the cord caused none. After an interval of 12 minutes pinching and puncturing of the skin caused no sensation. The usual incisions were then made exposing the glands and a sufficient portion of each cord, and the organs were removed. The cords were ligatured in toto, and the wounds were closed with continuous catgut sutures. During the operation, which lasted 20 minutes, the patient was not aware of what was being done. When the testes were dragged upon for the purpose of ligaturing the cords above the point of puncture only a slight sensation was felt, but the application of the ligatures was unnoticed. Beyond a slight mental exhilaration no systemic effects of the cocaine were observed. There was certainly no change, the author states, in the respiration or in the size of the pupil, and there was no flushing or pallor of the face. The pulse remained unchanged.

ENTERIC FEVER IN INFANTS.

Stowell (N. Y. Med. Rec., xlvii, p 321) in a paper on enteric fever in infants, records five cases and collects 80 others. The mortality was high, 25 or 31.76 per cent. The characteristic rash appears to have been noticed in 16 (possibly 18) cases; in two others there were irregular rashes. Death appears to have been due to the severity of the disease associated with marked intestinal lesions (ulceration, sloughing, perforation) in the majority of the cases, but in two cases it was probably determined by peritonitis; in one other by intestinal hemorrhage. In one case only was perforation recorded.

ON THE USE OF STEAM IN REMOVING TUMORS FROM PARENCHYMATOUS ORGANS.

Snegisjeff (Berliner Klinik, April, 1895, p. 13) reports a case of echinococcus which he removed from the spleen by the following method. The tumor was the size of a man's head. The incision was in the linea alba. The jet of steam was directed on to the larger convexity of the spleen, and the subadjacent tissue at once became white and dry. A completely bloodless incision, seven inches long, was then made through the splenic tissue, and the tumor peeled from its suroundings by the finger. Whenever hemorrhage, which was sometimes violent, occurred, it ceased at once when steam was directed on to it, and in this way the whole tumor was shelled out. It was then decided to suture the incision in the spleen except at one spot, to pack the cavity with iodoform gauze, to make a small incision in the left hypochondrium, and to stitch the spleen to the abdominal walls. In doing this the splenic artery was pricked and bled profusely, but hemorrhage ceased on the application of steam. Unfortunately the artery be-

came thrombosed, and after ligaturing it the spleen was completely removed. The patient recovered. Although owing to the accident to the splenic artery the intended treatment could not be carried out in this case, yet it is evident that an echinococcus or other tumor could be removed from any organ, instead of extirpating the latter. The steam is best superheated to 150 to 200 degrees C. In the case of soft organs the steam must not be at high pressure, and must always be directed obliquely on to the bleeding spot. In operations on bones the steam must be at high pressure.—British Med. Journal.

SALICYLATE OF SODA IN GRAVE'S DISEASE.

Chibret (Journ. de Med., April 10, 1895) speaks of the good results he obtained in the treatment of exophthalmic goitre by salicylate of soda. In each of four cases marked improvement took place in a few days, particularly in one case—a man who was totally incapacitated, but who was much better in six days, and able for field labor in a month. In others the symptoms returned on suspending the drug, although it seemed in one instance that after two years it could be much reduced without bad effect. If, however, the patient were overfatigued or chilled, the salicylate was taken in order to prevent any return of the symptoms. The writer was led to try this treatment by finding a family arthritic history.

INTRACTABLE VOMITING OF PREGNANCY.

Apply the continuous current, placing the positive pole on the clavicle, between the two branches of the sterno-cleido-mastoid, and the negative pole over the umbilicus. Use a current of 10 or 15 milliamperes for from 15 to 30 minutes. This method succeeded in five cases, in which vomiting was so intense as to render provoked abortion almost imperative.—Gaz. des Hop.

THE TREATMENT OF FAVUS.

Having found that the growth of the favus fungus was killed by heat at 45 degrees to 50 degrees C. (113 degrees to 122 degrees F.) applied to cultures of the same, F. Zinsser has treated five cases of favus by means of heat at 113 degrees F., generated by passing hot water through a properly fitting coil. Beneath the coil there is a compress, saturated with bichloride solution, about 1 to 2000. All but one of the cases were cured in a short time, apparently radically. The heat was applied continuously for 12 hours.—Archiv. Derm. u. Syph.

THYROID FEEDING.

Dr. J. J. Douglas, in experiments recently carried out, concludes: 1. That thyroid feeding markedly increases the proteid metabolism in health as well as in myxedema. 2. That its action is immediate, and continues for at least two days after it has been stopped. 3. That the loss of weight is probably more due to waste of non-nitrogenous tissues as fat than to waste of nitrogenous tissues. 4. That the absorption of proteids is diminished while the thyroid is being taken.—Proc. Royal Soc., Edin., Vol. xx., p. 330, 1895.

A PTOMAINE IN THE URINE OF CANCEROUS PATIENTS.

Griffiths (Comptes Rendus de l'Acad. des Sciences de Paris, vol. cxviii, p. 1350) describes a ptomaine extracted from the urine of cancerous patients. It is a white substance, crystallizes in needles, and dissolves in water with an alkaline reaction; it gives a brown reaction with Wessler's reagent. It is very poisonous, and injected into the veins leads to fever and death in three hours. It is not present in normal urine.

Medicine in Tokyo.—In Tokyo a recent census has shown that the city contains 2315 medical men, 70 dentists, 69 veterinary surgeons, 371 pharmaceutical chemists, two city hospitals, three Government hospitals and 41 private hospitals.

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ROYAL COLLEGE OF SURGEONS OF ENGLAND
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CLINICAL NOTES ON A RECENT SERIES OF SURGICAL CASES.

BY THOMAS H. MANLEY, M. D., NEW YORK.

(Continued from Last Number.)

HERNIA—VARIOUS TYPES.

Sixteen cases of various types of hernia have come under my notice since the beginning of the present term; these included strangulated, incarcerated, reducible and irreducible cases. But one case required operation for strangulation. The operation was performed late at night by a member of the house staff.

Deaths in Strangulation Attributable to Delay and Avoidable Errors in Operating—This case which terminated mortally was most fruitful in suggestion and in pointing the way to avoiding mistakes in treatment. The case was neglected in the beginning by the practitioner who was first called persisting in violent taxis and allowing his patient to suffer until collapse set in, before sending for or calling in active surgical relief.

The next oversight was committed in the details of operation. A knuckle of intestine partly twisted on itself, with a patch of gangrene about the size of a quarter extended through the glandular and muscular tunics, occupied the walls of the bowels, though there was no perforation, as the outer fibro-cellular coat was intact. Vomiting ceased after the constriction was relieved and the intestine returned; but the man did not react and sank thirty hours after operation. On autopsy it was found that a fatal error had been committed in the management of the extended coil. The adhesion which held the coiled, bent surfaces of the intestine together had not been liberated and, in consequence its lumen remaining completely obstructed, internal strangulation followed, thus removing every possible hope of recovery. The gangrenous area in my opinion was not enough to seriously call for resection, the use of the Murphy anastamotic button or other adjustment, inasmuch as it extended only about half way over the entire cylinder and would undoubtedly have taken care of itself by taking on adhesion to some of the neighboring viscera, thereby preventing any possible leakage.

Critical Inspection of the Protruding Mass and Thorough Liberation of all Constriction, both within the Sac, the Canal and at the Internal Ring, Indispensable in all Cases of Operation for Strangulation—In all cases of operation for strangulation after we have freely divided the points of stenotic impediment, it is of the greatest importance that we critically inspect the conditions of the ectopic viscera and completely liberate the imprisoned structures. A failure to do this renders an otherwise life-saving operation inert in its effects. A practical demonstration of this came under my notice recently. A man was seized with symptoms of strangulation after stool. He had a chronic incarcerated inguinal epiplocele. An incision was made down on to the upper surface of the mass, the omentum exposed and the inner ring divided. But there was no relief of the symptoms after operation and the patient sank unrelieved the following day. On autopsy a loop of intestine was found caught,

crushed under and concealed by the omentum. This had entirely escaped detection and continued occluded after the epiplocele was exposed.

Treatment of Reducible Hernia—Nine cases of reducible inguinal hernia have been examined by me within the past ten weeks. My practice in this class of cases is not to advise operation unless the hernia is progressively enlarging, is painful, threatens strangulation, is not trussable or the patient is desirous of relief from the deformity. Besides the class enumerated it is my custom to recommend a radical cure in females or in those individuals whose deformity constitutes an impediment to entrance into the civil or military service. But one of these nine which came to me was regarded as appropriate for radical cure.

He was a young man who had hernia since chidhood. It was of the indirect inguinal type. This was operated on with gratifying results, the patient leaving the hospital in two weeks.

O'Hara's or the Australian Operation the Best for Open Treatment—Of the almost infinite number of operations recommended during the past ten years for cure of hernia there is none which in so large a measure fulfills the requirements with so little mutilation as the operation devised by Mr. Henry M. O'Hara, of Melbourne, Australia. Briefly described it consists in an isolation of the neck of the sac, its division and retraction up through the canal and internal ring, to the fascia transversalis, where it is anchored by absorbable, suture material. It entails no weakening of the abdominal walls by divisions of large vessels; there is no drainage required and no disfiguring scars left. In fifteen cases so treated by me since April, 1894, there have been no relapses.

ABDOMINAL SURGERY.

Without doubt in the whole field of medical science and since its earliest dawn there has never been anything to equal the stupendous progress made in abdominal and pelvic surgery during the past twenty years, and in this, let medical history record it, America has occupied the position of the pioneer. In 1881 the celebrated Sims gave to the professional world his conceptions on the possibilities of surgery in this directon; though unhappily he did not survive to realize the fruition of his hopes. Biglow had perfected lithotrity, at the International Medical Congress, in Washington, in 1886. Nicholas Senn presented his thesis on the surgery of the intestine and startled the rank and file of the profession by the immensity of his original and marvelous researches and experimentation on abdominal surgery in the lower animal, and his lucid demonstration of their application to man. Abbe had been a generous contributor in this line and posterity is indebted to Sands for opening the way to operations on the appendix, since perfected by McBurney, and through which thousands of lives have been saved. It has rendered necessary the rewriting of the pathology of the peritoneum. As would seem the climax of all, the young Chicago surgeon, Murphy, has invented an anastomotic button, the very acme of human ingenuity, which has rendered the surgery of the intestine more expedient and safer than ever.

APPENDICITIS.

Timeliness and Skill in Operation on the Appendix—During one week from April 5 to 13, in this year, seven cases of severe abdominal disease came under my notice. Six were of appendicitis, four were of the perforating. type. Two came into the hospital in the advanced stages, too late for relief by operation and both died within twenty-four hours after entrance. Two were operated on, with perforation of the appendix in both cases. In one there was a double perforation with general peritonitis. Both recovered. Two mild cases of the recurrent type were treated by palliative measures, recovered. In one abdominal case which was brought into the hospital great prostration was present. My colleague, Dr. A. Palmer Dudley, was of the opinion that there was mechanical obstruction, though it was my impression that it was the appen-

dix which was at fault, and that obstrution was due to intestinal paresis. The abdomen was so extremely tympanitic that it was impossible to definitely locate the structures. On section the appendix was found healthy, and, as Dr. Dudley had predicted, the small intestine was found obstructed by a band at about its centre. The patient rapidly sank under ether before the incision could be closed.

It was formerly my conviction that as the danger in operating itself seemed to me very great, and the larger part of those cases of appendicitis do well under medical treatment alone, surgical interference was not proper in any except rare instances. Later experience has convinced me that this position is not logical, and that in all cases of appendicitis which show a tendency to persistently recur or are of the acute fulminant type, the correct course is prompt operaton. The results in operation depend almost entirely on operating at just the right time and performing the operation with skill and celerity. The time to operate is, and always probably will be, very difficult to determine.

Its performance for a successful issue in a large number requires special skill and experience. A small incision, the quick ferreting out of the appendix under the trained finger, the neat and aseptic amputation of it, without the loss of unnecesary time, or trauma of the peritoneal count vastly in the patient's favor.

On the 28th of April Dr. J. A. Hoffheimer called me in consultation to see a case of appendicitis under his charge with the view of determining the propriety of an operation.

The patient was a boy of twelve, who had had previous attacks. It was the sixth day of his illness when I saw the case. At this time his pulse was 143 per minute, the temperature 103 degrees; there was some vomiting and severe pain, when morphine was not pressed. The abdomen was extremely tympanitic, and over the appendix sensation to pain on pressure was extremely acute, and all the abdominal areas were hyperesthetic.

After a careful examination of the case, giving due weight to the various serious symptoms present, the lad's grave condition, and the uncertainty of results after radical measures, when the advanced stage of the disease is reached, my opinion was that nothing definite could be promised by operation, and that it was possible that recovery might ensue by energetic constitutional measures. Three days later the boy died just at a time it seemed that peritoneal inflammation had subsided. Now my regret is that I did not operate. Indeed, there can be scarcely a question that in all these cases, no matter what the stages of inflammation may be, when we are once assured that the appendix is the actual seat of serious disease an immediate operation should be invariably insisted on.

JOINT DISEASES.

The Influence of Systemic Cachexia on the Arthropathies which Succeed Injuries—Several cases illustrating the various phases of joint injuries and diseases have lately come into the hospital for treatment. The dominating pathological changes attending these were rheumatism and tuberculosis. There can be scarcely a doubt but various constitutional disturbances impress their stamp on many traumatisms and enhance the vulnerability of various organs and structures. This is especially true of the tissues which enter into the joints.

The articular heads of the bones are the centre of great activity during the processes of growth and development. As a move in the direction of arriving at an accurate knowledge of the precise pathological conditions which obtain in certain arthritic elements it would be well if the term "hip-joint disease" or "knee-joint disease" were abolished.

A young man in late autumn, 1894, sustained a sprain of the knee, in a football game. He was treated at home and elsewhere for "knee-joint disease." Failing to secure relief from the various fixation appliances which had been employed, he entered Harlem Hospital on the 12th of March. On a critical examination of

the joint there was no evidence of any morbid changes in the capsules or cartilages; but the head of his tibia was enlarged and exquisitely sensitive. The cancellous centre of this was opened freely; the trephine entering just under the insertion of the tendon of the sartorious. A pus cavity was tapped and a considerable residue of necrosed bone curetted out. All pain immediately ceased, the spasmodic contractions of the hamstrings passed off. He returned within four weeks to his trade of a painter when his "knee-joint disease" (?) was cured. A young man entered later, who a few days before had violently wrenched his knee. He was sent in to have the supposed hemorrhagic distension of the capsule relieved by evacuation through an orthrotomy.

It was found to consist entirely of a hematoma into the loose cellular tissue outside the aponeurotic investment of the knee-joint and wholly disappeared by a few days' rest, with moderate bandage-pressure.

A young woman of good physique was sent into the hospital for the treatment of "acute suppurative synovitis of the right knee-joint." On inspection it was found that the patella was displaced inward and deeply lodged under the projecting surface of the voluminous fullness, coming down from above. The case was clearly one of acute phlegmon under the fascia-lata; its fluid contents being arrested from advancing further downward by the insertion of its fibrous hood into the lateral surfaces of the quadriceps tendon. The articulation had wholly escaped. An incision, evacuation and drainage gave immediate relief and final recovery was rapid.

Rheumatic Pain Sometimes Antecedent to Trauma of the Joints—Rheumatic affections of the joints of the lower extremities are sometimes preceded by a weakening of the muscles. This precedes the intense pain and swelling. The person about to be seized is conscious of a sense of lameness or unsteadiness in the articulation. He is now liable to a fall or wrench, when all of a sudden, all the typical symptoms of acute inflammation set in and he has a panarithritis. To mistake this mixed condition for a joint trauma alone, and concentrate all one's attention on the local trouble may lead to serious results. Protracted fixation of a limb always interferes with its full nutrition and arrests its growth in growing children.

Several cases have been seen by me during the spring months, supposed to be organic disease of the joints, promptly recovered when all retaining supports were removed the joints allowed full liberty and rheumatic remedies pressed.

Resection of Diseased Joints or Conservative Methods—Formal resection of a joint is never done in my service, unless there is evidence that disease has completely disorganized it. In those cases it remains a question if an amputation is not preferable.Resection of a joint, let it be remembered, means its entire destruction. In the child, under ordinary surroundings, after a time tubercular disease of the heads of bone often tends to spontaneous arrest. My own practice in aggravated cases of this type is to open and curette the joint preserving the ligament and cartilages. In adult tuberculosis of bone reaction will not arrest the progress of the malady which is now usually generalized and progressive.

MAMMARY TUMORS.

Among the cases seen and treated by me within the past quarter were five cases of tumor of the mammary gland. Three of them were malignant, of the epithelial variety, one recurrent. Of the other two, one was a dermoid cyst and the other tubercular.

The Therapy of Mammary Neoplasmata—The cyst was readily decorticated, the incision promptly healing. Seven years before she had the opposite breast removed for the same condition, in which, up to the present time there had been no recurrence. An incision, grattage and drainage cleared away the strumous infiltrate.

The principles which should govern us in the management of cancer of the breast are still subjudice, indefinite and unsettled, although the

reports coming in from the results of tumor extirpation, of all the auxiliary absorbents with the complete removal of the mamary gland, point to a great improvement of this method, above all others.

One of three cases was treated by me in this plan for the reason that there was already an immense secondary growth in the axilla. In her case there was a large, hard infiltrating, secondary growth, in the axillary hollow, which required a very delicate dissection to remove it without damage to the main arterial trunk, to the trunk of which the tumor maintained a firm grip.

The long thoracic artery with the thoracic alarix were divided and the axillary vein opened. But all hemorrhage was readily subdued. The patient ultimately made a good recovery, though with marked limitation of shoulder action, in consequence of the cicatrical construction in the apex of the axillary space. The direction of dissemination in scirrhus is always centripetal along the course of the absorbent vessels. The adenomatrous structures of the lymphatics serve as outposts to prevent systemic infection, and no doubt are invaded at an early date. The complete operation is one which entails an extensive mutilation of tissue and is perhaps more dangerous to life than simple mammary excision; but the promise which it gives us against relapse more than outweighs these objections.

One patient with a small, hard scirrhus refused operation, and later I was informed, went into the hands of a charlatan.

A case of recurrent cancer had been first operated on by me in November, 1884, and again six months later. She had refused any further cutting operation.

In her case the powerful chemical cauteries have been employed by me with the hope of being able to clear away fungating crop of pulpy granulations, which occupied that site of the scar tissue. It succeeded fairly well at first, but its repetition in an attempt to destroy the substrata of neoplastic elements, was attended by such agonizing pain and positive shock that life was endangered, and my patient declared she would rather die than undergo the ordeal again.

When arsenical paste was employed, although its activity in charring the tissues was decided, yet there were invariably symptoms of constitutional poisoning; numbness of the extremities from toxic neumitis, nephritic irritation, with sore throat and very severe gastric symptoms,followed in every instance.

My own unsatisfactory experience with caustics has led me to employ them in malignant growths with caution, and never, except on those which occupy the periphery and are of a very limited area. In labial epithelioma or on senile growth, involving the nose or eyelids, the caustic substance will serve a most useful purpose.

The above incomplete notes and comments are on a class of cases that commonly come under our observation, and of late years have been treated with such success as was heretofore quite impossible. If in only a limited degree I have succeeded in calling attention to some of their most salient features and indicatory rational methods in their management, my aim has been accomplished.

A PLEA FOR EFFICIENT LEGISLATION REGULATING MEDICAL PRACTICE.

BY PERRY H. MILLARD, M. D., OF ST. PAUL.

(Continued from Last Number.)

Owing to the difficulty in securing indictments and the consequent tardiness of legal processes the penalty for violations of the provisions of this form of legislation should be by penalties imposed by a justice or a municipal judge; the latter method has given satisfaction as far as I am aware. Reasonable efficiency upon the part of the officers of these boards has been awarded by a full compliance with the provisions of this form of statute in all instances. The Governor should have the appointing power, being responsible for the successful operations of the dif-

ferent State boards. Experience satisfies us that the so-called mixed boards are doing satisfactory work and operating in perfect harmony. Seemingly no excuse exists for the duplicate boards operating in a very few States. At present approximately 30 States possess legislation regulating medical practice. Seventeen States have a form of statute that fails to recognize the diploma as evidence of fitness to practice; consequently they may be classed with those States operating under efficient acts. In the latter class of States I particularly desire to call your attention to the results of work thus far accomplished. In a paper read before this learned body, at Detroit, Mich., in 1892 I suggested the future influences of these boards as most important in shaping the future medical education in this country. I submit data at this time confirmatory of the position then taken and reaffirm my former suggestion that future legislation will in a great measure determine and govern the work of the teaching bodies of the country.

I am deeply indebted to the officers of the various boards for courtesies extended and regret that space forbids reference to many suggestions and conclusions arrived at in the work of the different boards.

Data have been obtained from the following named States: Alabama, Minnesota, Maryland, North Dakota, North Carolina, New York, New Jersey, Virginia and Washington.

The subjoined table indicates briefly the work of these boards:

State.	Examined.	Licensed.	Rejected.	Per cent.
Alabama	647	558	89	0.862
Maryland ...	150	105	25	0.806
Minnesota ..	641	499	142	0.778
New York ...	967	797	170	0.824
New Jersey..	447	417	30	0.955
North Carolina	615	508	207	0.71
North Dakota	81	76	5	0.938
Virginia	835	613	222	0.734
Washington ..	207	167	40	0.806
Totals ...	4670	3740	930	0.822

It will be observed that of 4670 persons examined but 82 2-10 per cent. were successful in securing a license. The 930 unsuccessful applicants have, we doubt not, principally located in States not protected by this form of legislation.

I am pleased to direct your attention to the good work of the Minnesota board. The first act regulating medical practice in this State became operative in March, 1883. It was the form of legislation at present in force in Illinois. It was in operation five years, being supplanted by the present law. The present act requires an examination of all persons commencing the practice of medicine and as amended by the last Legislature the minimum of requirements is changed, demanding that all graduates of later late than 1898 furnish satisfactory evidence of having attended at least four courses of lectures in different years, of not less than six months duration each.

We have in Minenosta a practical illustration of the position taken in my former paper: "That in medical legislation we have the only solution of the problem of higher medical education." Having drafted these bills and by force of circumstances been somewhat conspicuously aggressive in urging their enactment, I have, in consequence, witnessed their operations with some concern and interest. The result is all that the most sanguine could have anticipated. In a period of 12 years the proportion of physicians to the population in Minnesota has been reduced from one practitioner to ever 650 in 1883 to one to every 1000 in 1895. The State has been substantially rid of the traveling charlatan. The present able secretary, Dr. McDavitt, informs me that the medical census just completed is accurate and that the present operation of the law is quite faultless. We therefore conclude that in one State at least the number of physicians has been reduced to a number commensurate with the demands of the people.

The work of the New York board is attracting considerable attention. Notwithstanding pronounced opposition and many embarrassments the act is destined to strengthen the character of the profession in this

State. From advance sheets kindly furnished for use in this paper I observe the following verification of a position taken by the secretary, James Russell Parsons, in his 1893 report. He reiterates that the records of the past year conclusively prove the position taken in his 1893 report, "That the new law proves a barrier to the ingress of the incompetent, has operated to raise the standard of preliminary education, improve the methods of teaching and terms of study of the different schools of medicine."

The following resolution from the president and secretary of the board to the State Medical Society is significant and should meet the approval and support of every member of the profession of this great State, "Resolved, That in the opinion of this Board the best interests of the public and medical profession would be materially advanced by gradually increasing the minimum of requirements as to general preliminary education till no candidate be entitled to matriculate in 1897 at a degree granting medical school in this State that has not completed at least a full high school course."

I am pleased to note that this bill has already passed the Senate in New York and is in a fair way of becoming a law. If it becomes operative it will operate to improve the character of matriculation in other States. Greater co-operation is necessary between different State boards, as it is essential that harmony of policy exist as far as practicable. As in foreign countries their relations to the profession and teaching bodies is most important, their functions being that of professional censors of the conduct of the members of the profession, and guarding at the same time the avenues of entrance to professional work. It being the duties of these boards to protect the people from professional incompetency and charlantanry the duties are briefly comprehended in the performance of the following duties: 1. In establishing a minimum curriculum for all colleges whose alumni apply for a license to practice. 2. The individual examination of all persons wishing to practice medicine in the commonwealth. 3. A professional censorship, granting the right to refuse or revoke a license for incompetency and gross unprofessional or dishonorable conduct.

As this form of legislation becomes more fully understood and appreciated by the better class of schools it will be observed as one of the most certain and reliable avenues of placing before the profession of the country the character of work being done in all colleges whose alumni apply for a license. A school doing honest work has little to fear at the hands of these boards; upon the contrary, as suggested in my former paper, it will be found that the proportion of applicants able to pass successful examinations will be a certain index of the character of instruction afforded students in the respective schools.

While the proportion of applicants successful is only 82 per cent., it will be found that from the schools heretofore operating under a high grade of requirements that thus far at least in the work of these boards nearly all graduates are successful in obtaining license upon examination. In substantiation of this conclusion I again submit data, using therein the same schools as in my former paper.

The following table indicates the proportion of students successful on examination from alumni of schools heretofore operating under the three years' curricula:

Colleges.	Examined.	Licensed.	Rejected.	Per cent.
Harvard	31	31	0	1.000
Columbia	123	118	5	.952
Univ. of Penna....	126	123	3	.976
Univ. of Michigan	83	78	5	.940
Northwestern Univ.	26	22	4	.846
Univ. of Minnesota	149	148	1	.992
Totals.	538	520	18	.964

I cannot but conclude, gentleman, that efficient medical legislation will operate to bring about the following results, as applied to the profession and public.

1. It will protect the people by affording a profession of greater intelligence.

2. It will suppress charlantanry.

3. It will reduce the number of persons practicing medicine to a number commensurate with the demands of the people.

4. It will reduce the number of medical colleges, at present far above legitimate demands.

5. It will raise the general standard of professional fitness, assuring us a professional prestige in the future, becoming the most important of the learned professions.

In conclusion, we appeal to the profession to renew their efforts in securing efficient medical legislation, believing its operations will result most benefically to both public and profession.

LOSOPHAN.

BY WILLIAM F. WAUGH, M. D.,
Professor of Medicine, Chicago Post Graduate Medical College, etc.

So many new remedies are placed before us that there is danger that really valuable ones may be overlooked, in the crowd of competition. This fate seems to threaten losophan; since I find no mention of it either in Becquerel-Limousin's Nouveaux remedies or the work upon the local therapeutics issued by Harrison Allen and others.

Losophan is a tri-ido-cresol, resulting from the action of iodine upon m-oxytolnic acid in the presence of an alkali. It is slightly soluble in alcohol, freely in ether, benzol or chloroform. Fixed oils at 60 degrees take it up readily. Losophan occurs in white needles. It contains 80 per cent. of iodine. Its antimycotic powers should, therefore, be considerable; and this has been proved by clinical trials. Among the affections in which it has been used successfully are mycosis tonsurans of the body, nerpes tonsurans, sycosis, ornychomycosis tnsurans, pityriasis versicolor, eczema, prurigo, ache rosacea, epizcon, pediculosis, scabies, chancre and the wounds from operations upon buboes.

In pityriasis versicolor losophan was applied in solution and ointment of one to two per cent. In eczema it proved irritating, but exerted a very favorable action upon chronic infiltrations and especially proved efficacious in relieving the itching. In prurigo and in a number of cases of itching from various causes it gave speedy relief. Sycosis has been cured by ointment of one to two per cent. in obstinate cases that had resisted all previous treatment. In acne and rosacea improvement has always followed the application of one to three per cent. ointments, without much irritation. For pediculosis of all varieties the solutions were made of one per cent. with 25 per cent. of vinegar. Scabies required ointments of two to three per cent. A dusting powder of one per cent. has been employed upon cutaneous ulcers, and after operations upon chancre and buboes.

The contra indication for losophan is acute dermatitis, in which it increases the irritation. The formula recommended for the solution is as follows:

Losophan 1.0 dissolved in alcohol, 82.5; adding castor oil, 7.5, and distilled water, 9.0. If a stronger solution be required add losophan and use less water. Ointments of 10 per cent. have been used with good effect in scabies and in sycosis.

My own experience with losophan covers a period of two years. I feel tempted to denominate it the antipyritic, so universally has it proved efficacious in relieving itching of every description. Very severe and obstinate cases of pruritus ani and vulvae, the itching legs of plethora, the pruritus of chronic eczema, have been relieved by losophan. In acute eczema, and whenever there is inflammatory reaction, losophan must not be used in a strength exceeding one per cent., or it may cause irritation. A patient recently came to my clinic with acne and rosacea of several years' duration, defying all previous treatment. She was given a one per cent. lotion of losophan, to be used twice daily. In one week she returned, the acne nearly well, but several spots of rosacea somewhat irritated. A little ointment was applied to these and the lotion continued, recovery was complete in two weeks more. There is one very annoying

affection for which I have tried many remedies unsuccessfully, until losophan proved effective. This is pruritus of the prepuce. The mucous membrane has a puffed, reddened, velvety appearance, and can be felt to be thickened. The itching is intense, and is aggravated by rubbing. In one case the pruritus occurred every time the patient had connection with his wife; in another the affection appeared only after browing in strange pastures; while in a third it would begin if the organ were not washed in cold water without soap at least twice a day. There was no secretion in either of the cases observed by me, though one was accompanied by eczema of the anus. In all the application of losophan one per cent. in petroleum gave speedy relief. I have restricted my remarks to those cases in which losophan has given better results than any remedies previously employed. The field of its utility is by no means limited to the cases quoted; but when the results are not better than those obtained from remedies in common use it is better to omit such data as uselessly adding to the bulk of medical literature.

MY EXPERIENCE WITH THE IMMEDIATE REPAIR OF UTERINE INJURY FOLLOWING LABOR

By A. PALMER DUDLEY, M. D.

In the February (1895) issue of the American Journal of Obstetrics, Dr. Dudley states that he has performed immedate repair on 21 cases since 1889, and has yet to see the first bad results from such manipulation and repair of the uterus. He makes it his rule, while waiting for the placenta to be delivered (during which time he allovs the patient to sleep under the influence of a few drops of chloroform) to examine the cervix, perineum, urethra, vestibule, etc., and if he finds a tear of the cervix, he entrusts the chloroform to an assistant, delivers the placenta, and, after thorough disinfection and aseptic precautions, repairs the rent with the patient in Sim's position and by the aid of a large Sim's speculum. He prefers No. 5 catgut for the sutures.

A series of five cases are reported to illustrate his methods and success, and he summarizes as follows:

1. Suturing of the lacerated cervix properly immediately after delivery will result in primary union of the same and prevent many of the evils that follow in the wake of a union by second intention. 2. The fear of septicemia attending the manipulation of the cervix for the same, and the introduction of poisons which will induce septicemia at the same time, is an unfounded one, and would be dissipated by giving such work a proper test. 3. It is a method of procedure more justifiable than an immediate repair of the perineum, which the profession of today universally advocates. 4. The securing of primary restoration of the laceration hastens involution, prevents subinvolution and the various forms of displacement which are induced by it in such an overweighted organ. 5. That catgut is the proper suture and perfectly safe and reliable when properly prepared.

Prescriptions.

Vomiting in Pregnancy.—Paint os with cocaine, or give by mouth, combined with antipyrin:

B—Chlorhyd. cocaine .....1½ gr.
Antipyrin .....16 gr.
Aq. dest.....4 oz.
Sig.—Teaspoonful every half hour until the vomiting ceases.—Lutaud.

Dry Tongue in diabetics, etc.:

R—Pilocarpin. nitrat.....1-3 gr.
Spirit. vini dilut.....20 minims
Aquæ .....1 dram
M. Sig.—The tongue is to be moistened with five or six drops of this solution four or five times daily.

Gonorrheal Cystitis:

R—Pyoktanin .....15 gr.
Boiled distilled water.....2 scruples
M. Sig.—Inject morning and evening for ten to fifteen days.—Lutaud.

Rachitis:

R—Phosphorus 0.01
Cod-liver oil .....100.
Saccharin ..... 5.
Essence of lemon.....2 gr.
Teaspoonful daily.—Guinon.

Eczema of the Vagina:

R—Ichthyol ammon.....1½ to 2 parts
Amyli tritici,
Zinc. flor.....aa 12 parts
Vaseline .....25 parts
M. et fit pasta.—Von Sehlen.

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THE MEANING OF PERCENTAGE AS APPLIED TO ANTISEPTIC SURGICAL DRESSINGS.

Within a few weeks past there have appeared in the pharmaceutical journals a number of articles in discussion of the question which forms the caption of this paper. The question is a very simple one and may be briefly stated, and it would seem at first thought that there was no occasion for any great amount of agitation of it. But because of the existence in the market of surgical dressings of two kinds, dry and moist, prepared in accordance with different theories or principles, and severally exploited by various houses, each active in advancing arguments in support of its own position, a little investigation shows considerable confusion relative to the matter. The question is this. In the use of a statement of percentage upon the labeling of the packages of antiseptic dressings, it is generally understood by the dealers and surgeons that the percentage refers to the actual amount by weight of antiseptic in a given weight of the finished product, dry or moist, or does it, or should it, refer to the percentage composition of the solution by which the gauze is medicated in the process of manufacture?

Each proposition has its own advocates, and testimonials and statements of physicians without number may be quoted on either side, in support of either understanding. It is evident, therefore, that a great confusion exists among the users of the gauze, surgeons and physicians, as well as the difference between competing manufacturers. To estimate this difference at its true value, to discover its practical bearing upon the practice of surgery, and to ascertain how it has arisen and why it exists, it is necessary to go back a few years and trace the matter through its various phases and developments down to the present day and to present existing conditions.

Just what formula is most desirable for an antiseptic application, whether a dry or a moist gauze is preferable, is entirely a matter for the surgeon to decide. If he prefer a dry iodoform gauze, containing 10 per cent. by weight of iodoform to 100 parts by weight of the dry finished gauze, or if he prefer a gauze dipped in a 10 per cent. solution (any chosen formula) and wrung out, but left in a moist condition, this is entirely his affair. He should know, however, but proofs at hand have amply satisfied us that he does not know, in all instances, the exact strength of the medicament applied to the wound. An examination of the formulas of the hospitals and of those in private use by various surgeons, shows in nearly every instance an element of error, whereby any variation in the weight of the gauze, its fineness, etc., may lead to a very decided variation in percentage composition, if the percentage is based upon the weight of the finished product. Does the physician wish to ap-

ply a dry gauze to the wound? If so, he applies the inert substance gauze, bearing pure iodoform. Or does he prefer moist gauze, medicated by a 10 per cent. solution? In this case he is not applying pure iodoform, but a 10 per cent. solution. This is a matter for him to decide, which he prefers.

Let us examine into one or two aspects of the question which appear of importance. The National Formulary, a few other formulas which we have been able to find, and one or two manufacturers base their operations upon percentage of parts by weight in the finished product. A great majority of formulas, however, and more than half of the manufacturers, make a gauze impregnated with a solution of definite percentage strength. Upon comparing the various products some interesting points are brought out. The following are actual weights of the gauzes employed by the firms and institutions mentioned, in grains per square yard:

Lehigh, E. (National Formulary)	785
Johnson & Johnson	585
Bellevue Hospital	570
J. Ellwood Lee Co.	539
Seabury & Johnson	436
Hospital Supply Co.	256

From the above it will be seen how greatly the unmedicated gauze varies in weight per square yard. Now, suppose we use the National Formulary process with these gauzes. To make one square yard of plain gauze 10 per cent. strength, the amounts of iodoform required, in grains per square yard, will be as follows:

Lehigh, E. (National Formulary)	92
Johnson & Johnson	69
Bellevue Hospital	67
J. Elwood Lee Co.	63
Seabury & Johnson	51
Hospital Supply Co.	30

In other words, one gauze will require in grains more than three times as much as the lightest on the list to make a gauze by the National Formulary process.

Going a step still farther, in order to point out what we consider the fallacy of the finished product standard, attention is called to the following tabular statement which, for the sake of comparison, shows the weights of one yard of iodoform gauze as finished for the market by the various processes:

Johnson & Johnson	1389 gr.
Bellevue Hospital	1270 gr.
J. Ellwood Lee Co.	939 gr.
Lehigh, E. (National Formulary)	937 gr.
Seabury & Johnson	697 gr.
Hospital Supply Co.	384 gr.

Now, if all these gauzes were required or understood to be of a standard of 10 per cent. by weight of the finished product, the heaviest one would contain five times as much iodoform to the yard as the lightest, or, if the lightest gauze showed 10 per cent. of iodoform by assay, the heaviest gauze would only require from 3 to 4 per cent. to the square yard. In view, therefore, of the confusion and discrepancies and the discussion between surgeons and manufacturers, it appears very evident that the establishment of a definite standard and adherence thereto by the manufacturers is necessary. It is not fair to apply the percentage by weight standard to a moist dressing, for it is easily seen that it may assay less than this standard, and yet really contain two or three or more times as much medicament to the square yard as another dressing, dry, which assays the percentage claimed.

The label on the antiseptic dressing should express its strength, either in grains of the medicament to the square yard, or in percentage of the finished product, or the percentage strength of the solution employed in the medication of the dressing. On this point there should be no agitation whatsoever, and we note that Johnson & Johnson now include upon their labels a statement to the effect that "This gauze is a saturation of sterilized absorbent gauze with a stable emulsion containing 10 per cent. of iodoform. The impregnation is uniformly and accurately adjusted upon a basis of 10 parts of iodoform to 90 parts of dry gauze. Approximately, each square foot contains eight grains of iodoform." Seabury & Johnson state on their labels the percentage by weight of the dry product. If all the manufacturers would follow this course of making the label tell exactly what is contained in the package, there would be no necessity for farther agitation of this percentage matter.

MEDICINE AND CRICKET.

The London Lancet remarks on the benefits of the British national game in its health giving properties and offers congratulations to the champion exponent as follows:

We congratulate Mr. W. G. Grace on the enthusiastic unanimity with which all classes of the community have welcomed the idea of presenting him with a testimonial. We entirely sympathize with a movement having for its object a material proof of the general recognition of the qualities which have raised Mr. Grace to his position of champion exponent of the national game and—by far the more wonderful thing to tell—have maintained him in that position for 20 years. Skill, endurance, patience, courage, strength, delicacy of movement and alertness constitute in different proportions the endowments of the successful cricketer, and the pre-eminent champion at the game may therefore be credited with having displayed for years a just combination of them all. What better man can the sport-loving Briton find to honor than the author of such a display? Mr. Grace's connection with our profession naturally turns our thoughts, subdued to what they work in, in one direction: Has his profession assisted in this maintenance of a remarkably high level of athletic prowess. And we make bold to say, yes. We are not claiming that because the well-trained eye, the skillful hand, and the temperate mood equally comprise the chiefest virtues of the surgeon and the cricketer, a medical education should turn out experts at Lord's. Such a claim, by working both ways, would land us logically in the recommendation to our readers of Gunn for an enterostomy or the younger Druce for a litholapaxy! But we do claim that Mr. Grace's profession has counted for much in keeping him through two decades in the absolute front of the cricketing world. It has given him a wise insight into the rules of health, and furnished him with a knowledge of reasons that cannot have failed to be useful to him in times of physical or mental depression on the field, in unfortunate conjunctions of the game, even in seasons of comparative ill-success. And, considering that his display of evergreen vigor reflects honor upon the principles of medicine, we recommend to the favorable consideration of our readers the project of a national testimonial to our professional brother.

SCHOOL BOY'S MEALS.

At the last meeting of the Association of Medical Officers of Schools, Dr. Horace Savory, medical officer to Haileybury College, read a paper on "Meals of Food for the Schoolboy." The first question that arose, he said, was, How many meals are necessary or advisable, and when should they be taken? He thought there was a general agreement that the main meal should be at midday, from 1 to 1.30, and not in the evening. But did not this cause interference both with work and play? What time ought to elapse before either was undertaken? Was an hour sufficient? Masters often complained that the work done after dinner was not of much use; but he had never known any harm ensue to a boy from playing football an hour after dinner, though it was true that some boys, when they were going to play, ate sparingly at dinner for fear of spoiling their wind. It was unfortunate that we could not give the schoolboy a half-holiday every day to digest his dinner. When lessons had to be done before breakfast, it was most essential that some food should be given before the lessons were commenced. It was a meal that was unpopular both with masters and boys, and at his own school not more than 25 per cent. of the boys took it; but in his opinion it ought to be made compulsory, and not left as at present as a voluntary meal. For children under 12 no work should be allowed before breakfast, and it was quite an open question whether it would not be better to commence the day with the main breakfast, say at 7 or 7.30 A. M.; boys should not be allowed to miss this meal, and there should be responsible people to see that each boy ate it, and an interval

of at least half an hour after it should be allowed. The evening meal should be a substantial tea not later than 7.30; anything like a "sit down" supper was to be avoided, as also any articles of diet likely to cause a disturbed digestion or a loaded bladder in the early hours of the morning. As a rule there should be no feeding at other times, but if a boy was for any reason unable to take his tea he might have some bread and butter and cocoa or milk at night, and of course allowance might always be made by the medical officer for delicate children. The early meal should consist of cocoa, with plenty of milk and bread and butter. Breakfast proper was the meal which most needed improvement; fish, eggs, ham or bacon were most appetizing, and much preferable to cold meat; porridge was an excellent thing, and might be given three or four times a week with plenty of milk and sugar, but it should be given at the end of the meal and not at the beginning, as it was bulky in comparison with its nutritive value and might interfere with a substantial meal being made if taken first. Dinner was of much the same type at all schools; a great difficulty was the supply of green vegetables all the year round and then getting the boys to eat them when they had been provided. At his own school recently soup had been started with satisfactory results, and the cost, with good management, was practically nil. Puddings were always a difficulty, the number of interesting inexpensive varieties being limited, and sometimes the most wholesome was unpopular. He would allow a glass of mild beer, though he did not consider it of any value in the dietary of the healthy schoolboy; he found that about one boy in four drank two glasses of it in summer; it would be unwise to forbid alcohol, as a boy always craved for that which is forbidden. Tea should be mainly farinaceous, tea, bread and butter, and jam being the chief ingredients; meat, cheese, or beer were most inexpedient. He found that a liberal allowance of sugar was very beneficial, and it was also a good plan to have as great a variety in the bread as possible, and not only in the kind, but a variety in the shape would also tempt boys to eat, and he did not object to the occasional supply of new bread if the loaves were made small so that there should be a large proportion of crust. Dr. Savory then went into the scientific aspects of the question in some detail, inquiring what amount of mechanical work represented in foot pounds would be done by the average schoolboy at different ages, and, further, whether the diet ordained was capable of supplying the necessary potential energy, this part of his paper being illustrated with tables compiled from various sources. The paper concluded with some practical suggestions as to the causes of healthy appetite or the want of it in schoolboys. In the discussion which followed, in which several members took part, a feeling, though not unanimous, was expressed that the evening meal might be made more substantial.

Medicine.

IN CHARGE OF

DR. E. W. BING, Chester, Pa.

DIAGNOSIS OF AFFECTIONS OF THE STOMACH.

Since not every person can make an analysis of the gastric juice for diagnostic purposes it is useful to know some minor means by which a distinction may be made. These are based on the sensations of the patient after a light meal (dejeuner).

When the stomach acts normally no unusual sensations are noted; other symptoms corresponding to the various affections are complained of.

When in about two hours after the meal there is heat in the stomach, a sensation of increased acidity, we have a case of hyperacid dyspepsia. When, on the contrary, flatulence occurs, with heaviness and slowness of digestion, we have hyperacidity. When at the end of about a quarter hour there is uneasiness increasing as in proportion to time, we have irritation of the stomach, or gastro-

duodenitis. In hyperacidity the complaint is not felt till three or four hours after the meal, and is worse at night, especially between the hours of 11 and 1.

At other times the introduction of food either gives ease or provokes pain. In the first case it often means hyperacid dyspepsia, but in painful dyspepsia and gastralgia in chlorotics, there are attacks of pain following the introduction of food. The occupation of the patient often gives useful hints. Hyper acidity and gastric catarrh are frequently seen in persons using alcohol as a beverage.

Decubitus is somewhat useful as a treatment. Where there is stasis of the food or a tendency to it the person should be on the right side, as this favors passage of food out of the stomach.—Rev. Medical.

THE TREATMENT OF LIGHTNING PAINS IN LOCOMOTOR ATAXY.

Blondel (Rev. de Ther., April, 1895) treated a case of locomotor ataxy in a man with syphilitic history, aged 29, who suffered intolerable lightning pains as follows: The patient lay on a bed with the thighs flexed on the abdomen, so that the knees approached the chin, the legs being flexed as much as possible at the same time. A cord passed round the neck and under the knees enabled him to maintain this position for five minutes. This was repeated every night for eight days, when the pains disappeared. As they returned a month after, the same treatment was resumed for five nights. Two years have passed since then, and the man is apparently completely cured. Blondel considers this a scientific method of treatment, causing a slight elongation of the spinal cord in the same way as suspension, without any of the danger which accompanies the latter method, and without any apparatus.

THE REALITY OF APPARENT DEATH.

From time to time the public mind is aroused, or rather, perhaps, we should say attempts are made to arouse the public mind, by the assertion that cases of premature interment are by no means infrequent. Our attention has been called to a letter in an evening contemporary in which the writer, who, by the way, does not give his name or address, states that a case of supposed premature burial having occurred in his own family has given him a painful interest in the subject, and he is of opinion that such cases are of far more frequent occurrence than is generally admitted. We confess we do not quite know what is meant by this last sentence; we entirely agree with the late Dr. Tidy, when he said: "Whatever may have happened, modern stories of premature burial in England belong to the domain of the novelist rather than of the scientist." The writer of the letter above alluded to says that medical journals rarely take cognizance of reported cases, with a view probably of maintaining the infallibility of medical death certificates, and preserving professional reputations. In this view we can assure him he is absolutely mistaken, and if we do not often take notice of these alleged occurrences it is either because the circumstances under which the story is told are not such as to entitle it to belief, or because no particulars are given enabling us to inquire into the facts for ourselves. We are, however, always open to conviction, and if the correspondent will furnish us with the name of the doctor who certified the death that he mentions as having occurred in his own family, we will do our best to ascertain the truth, for if these cases of premature interment really do occur even occasionally in this country, then the sooner we revise our beliefs as to the signs of death the better. But until we have had the opportunity of investigating one of these cases we shall continue to maintain our attitude of disbelief. The writer incidentally mentions that decomposition is the only reliable sign of death, but if coldness and rigor mortis do not satisfy him, we are surprised that he should accept anything short of actual disintegration of the body as

convincing proof of death. Of course the one crucial early sign of death is the entire and continuous cessation of the heart's action; all other signs are of quite minor importance in comparison with this, for no matter what they may tell us, so long as any trace of movement of the heart can be made out the subject is still living; and, on the other hand, in the words of the leading authority on forensic medicine, it is impossible to admit that the heart can remain for even half an hour in a state of absolute inaction in a human being, and then spontaneously recover its activity.—British Medical Journal.

NUTRITION IN PHTHISIS.

Robin (Arch. gen. de Med., April, 1895) gives the results of his researches into the urinary solids in phthisis. In 43 cases the average daily excretion was about 50 g. in 21 cases, which were either improving or stationary, 33 g. in six cases which were losing ground, and 29 g. in 16 fatal cases. Any case of phthisis in which the average reaches 30 g. may be looked upon, with certain exceptions, as having arrived at the cachetic stage so far as nutrition is concerned. Cases improving under treatment excrete more solids in the urine the weight being stationary, or less solids with increase in weight if fever, diarrhea, or appreciable night sweats are absent. Hemotysis causes a diminution in the urinary solids, persisting for several days. In cases which become worse, a steady diminution in the solids without any increase in weight stands in relation with an aggravation of the malady. In advanced phthisis fever is rarely accompanied by increase in the urinary solids. The supervention of generalized tuberculosis, pneumonia, etc., causes a diminution, and such a sudden diminution should draw attention to the appearance of these complications. In cases treated with increasing doses of cod-liver oil after Jaccoud's method, diminished solids indicate saturation of the body with the oil, which should then be stopped. If the solids then increase without loss of weight it is a favorable sign. As regards the inorganic compounds an increase is noted in early phthisis, and the author thinks that this increase may have something to do with the preparation of the soil for the tubercle bacillus, and may furnish indications for treatment.

Surgery.

IN CHARGE OF
DR. T. H. MANLEY, New York.

AN ABSTRACT ON ESSAY—THE ELEMENT OF THE CIRCULATION IN FRACTURES.

BY THOMAS H. MANLEY, M. D.,
New York.

(Conclusions.)

First. In fractures of every description which involve the shafts of the long bones or the joints of the extremities our first and most important concern is the preservation of the circulation.

Secondly. In compound fractures, associated with an extensive laceration of the blood-trunks, after the parts have been rendered aseptic in the primary dressing for local hemostasis, moderate tampourage with gauze, with prudent bandage pressure, will generally suffice.

But when the larger arteries are lacerated, and it is important to immediately reduce the on-flow through the main arterial trunk, the tourinquet properly adjusted is to be rather relied on.

The Csmarch bandage, because of the pain attendant on its use, and its great constructing power, should not be indiscriminately employed, nor under any circumstances over a period of more than two hours. Its use is attended with greater danger than any other hemostatic agent in severe lesions of the arteries, associated with a shattering of bone and laceration of the soft parts.

Thirdly. As the main arterial

trunks may sustain varying degrees of damage in so-called simple fracture, thereby threatening the vitality of the parts beyond, in all these cases our attention should first be directed to placing the limb in such a position and under such conditions as will best favor a full re-establishment of the circulation and the preservation of the limb's vitality, irrespective of what the precise state of the disorganized bone may be.

Fourthly. As the vitality of a limb after a serious fracture, with a thrombosed state of an arterial trunk, depends on the prompt establishment of a collateral and peripheral circulation, restraining splints and bandages must not be applied until we are assured that the temporary asphyxia or suspended state of animation in the limb has passed off, and the normal heat has returned; in the meantime, depending on posture, muscular relaxation and the application of artificial heat, to aid in reanimation.

Fifthly. As dry gangrene is the type of molecular death, which follows in the wake of aseptic thromboses of the chief arterial feeders, with proper precautions to preserve the surface aseptic, the parts desiccate up to the line of demarkation, putrescent mortification is wanting, and hence there is no haste to amputate till the processes of nature have clearly defined the limitations of decomposition, and the areas of living parts. A primary amputation here, then, should never be permitted in civil life.

Sixthly. As there are good reasons to believe that the union of fractured bones is sometimes delayed, or even wholly arrested by the premature or too rigid adjustment of them in fixation apparatuses, or, in consequence of them being too long employed, caution should be observed not to unduly constrict the circulation by any sort of mechanical appliance, rather, on the contrary, it is probable that in not an inconsiderable number of fracture cases the circulation of the limb is favored, the nutrition improved, raparative osteogemsis hastened and perfected by occasional moderate motion, massage and only such an adjustment as will provide support alone to the limb without simultaneously exerting too much pressure.

TRENDELENBURG'S OPERATION FOR VARIX OF THE LEG.

This operation is based on the fact, established chiefly by Trendelenburg's investigations, that the primary cause of the varix is insufficiency of the valves of the veins, whereby the weight of the blood column in the saphena is thrown on the peripheral vessels. It consists in ligature of the saphena in the upper part of the thigh. G. Perthes (Deut. med. Woch., No. 16, 1895) reports 41 cases thus treated, of which 32 were permanently cured. Relapse having been traced in several cases to renewed permeability of the ligatured vein, the rule is now, instead of simply tying the saphena, to exercise a short portion. The results are stated to be surprisingly good, and the proceeding has over Madelung's extirpation of the varices the advantage of simplicity and ease of performance.

A NEW METHOD OF ABDOMINAL HYSTERECTOMY.

At the recent meeting of the American Medical Association (Med. News. May 11) N. Senn described the technique of a new method of abdominal hysterectomy. The dangers attending hysterectomy, he said, were shock, hemorrhage, injury to important adjacent organs, and septic infection. The operation now described was intended to remove these dangers. Unnecessary handling of organs and loss of heat were the most active agents in the production of shock. The aim of the operation was to secure access to the myomatous uterus in as short a time and with as little exposure of the organ as possible. After incision, as in the ordinary manner, with ligation of the ovarian arteries, the uterus was brought to the wound. The peritoneum was then incised across the uterus, and the flap thus matched

to the parietal peritoneum. The opposite side was treated in the same manner. This cuff was readily made by means of dissecting forceps and the hand. As soon as the cuff had been sutured to the lower angle of the wound the remainder of the abdominal incision was closed. The tumor or tumors were then extirpated. This part of the operation could be accomplished within a few minutes, and the remainder proceeded with leisurely. The uterus was next amputated at the desired point. If the cervix was affected the entire uterus could be extirpated in the same manner. The uterine arteries were then ligated by an indirect ligature. The arteries need not be isolated, but could be recognized and tied. Amputation was affected by an oblique incision, so made as to form a cone of the uterus and a corresponding depression in the parts left. There was very little hemorrhage if the arteries were tied on both sides. After removal of the uterus the mucous membrane of the cervical canal is cauterized and the uterus closed by chromicized catgut. Two additional rows of buried sutures were then inserted to close the stump and thus arrest parenchymatous oozing. If hemorrhage occurred at any time the amputated surface remained in ready access for the next 48 hours. Adhesions need no longer be dreaded, because the enucleation was the same whether the uterus was adherent or free. If the operator used the necessary antiseptic precautions the only possible source of infection would be the hand or sponges. The wound, two or three inches long, with the stump of the uterus on the floor, was packed with iodoform gauze. Temporary sutures were inserted. In from 24 to 48 hours later the gauze was removed and the wound closed. At no time was there any tension at the stump. If infection should occur after the operation, it was limited to the wound outside of the peritoneum. The crucial test of an operation was furnished by its results. In 32 or 35 unselected cases treated by this method recovery ensued in all without untoward results.

Gynecology and Obstetrics.

THE THERAPEUTIC ACTION OF CHLOROFORM IN PARTURITION.

At the recent meeting of the American Medical Association Bedford Brown (Med. News, May 18) read a paper on the use of chloroform in labor. He said that in all ligature there are reported not more than 40 cases of death from chloroform in labor. He had used the anesthetic, given every half hour for from 20 to 40 hours, without any trouble following. He had seen profound chloroform narcosis in obstetrics lasting for three or four hours without grave effects. He objected, however, to the careless use of the anesthetic. The alteration in the vasomotor system of a pregnant woman enabled her to resist the toxic action of chloroform to this wonderful extent. Was the use of chloroform in labor for the relief of pain alone justifiable? He believed it was not only justifiable, but that it would be inhuman to withhold it. At what stage of parturition was chloroform applicable? For pain in any stage in small quantities. To remove muscular rigidity of the cervix or perineum a larger quantity was required, until there followed complete muscular relaxation. Did chloroform tend to prevent uterine contractions? If given in sufficient quantity it would do this. Did its use tend to promote hemorrhage? He had never seen a greater tendency to hemorrhage after than without its use. In 2000 cases of labor which he had attended he had given chloroform in 1500 without ill effects following.

DANGERS OF THE CURETTE.

During recent years the use of the curette in gynecology has become much more general, and the treatment has proved to be not only scientific, but successful in cases, for example, of small growths in the uterine canal, or of the fungous condition of the endometrium, which for-

merly proved so rebellious to treatment. The removal of these conditions by scraping them away has become a comparatively easy matter. This very success, however, has led, perhaps, to the curette being used, in some cases, rather recklessly, and it is necessary to emphasize the caution to which a French writer has recently drawn attention, that the use of this instrument may sometimes prove very dangerous. The curette has, for example, been known to perforate the uterus, and it must be remembered that, especially after pregnancy, or in cases in which growths have persisted for some length of time in the canal, the substance of the uterine wall becomes abnormally soft. Then, again, there are cases known to many gynecologists in which a pelvic abscess existed, and had been overlooked, or in which a pyosalpinx had been unobserved; and in both these conditions the active treatment of the canal of the uterus by the curette has led to rupture of the abscess sac, with rapidly fatal results. It is, therefore, important to remember that, valuable as the curette is, its use is far from being unattended with danger, and that simple as its action appears to be, in the hands of an expert, and under the proper conditions of dilatation of the cervical canal, there are many instances in which carelessly or improperly employed, it has caused irreparable harm, and even rapidly fatal results.—Med. T. and H. G.

TREATMENT OF ABORTION.

Dr. Nicholas Sarmak, of Biecle, Polish Russia, in Therapeutische Mowatshefter, reports 40 cases of threatening abortion where hemorrhage had set in with contraction of the uterus, treated with injection of 30 drops of Tr. asafetida in one or three ounces of water three times daily. In 37 cases the hemorrhage and contractions of the uterus ceased and pregnancy progressed, and only in three cases the treatment was without good results.

Also in habitual abortion he had good results by the exipition of asafetida in the following manner: Gume resinae asafetida, gr. 90, made into 60 pills, and give two daily and increase until 10 are taken daily and then decrease. In one case where patient had aborted 14 times under the above treatment patient went to full term.

THE FUTURE TREATMENT OF SEPTIC PELVIC DISEASES.

Heurotin (Amer. Gynec. and Obstet. Journ., May, 1895) thinks that in 10 years these affections will be treated in a more definite manner than at present. Having failed to stop the disease within the uterus physicians will not wait idly by whilst peritonitis and cellulitis play havoc and produce incurable destructive conditions. Incipient phlegm in the broad ligaments will be incised and drained early, intrautubal disease will be recognized in time for conservative treatment, which will follow the perfection of radical work. In neglected cases, when the appendages are the seat of chronic diseases, they will not always be sacrificed; in a young subject drainage of an ovarian or tubal abscess may be followed by cure and restored function. The incision in such a case will be made through the abdominal parietes. But when it is evident that both appendages are hopelessly diseased hysterectomy through the vagina, with complete removal of the appendages, will be practiced. Too many radical operations are now performed; 10 years hence conservative treatment will save numerous ovaries.

Miscellany.

TETANUS TREATED BY ANTITOXIN.

Matteucci (Rif. Med., April 22, 1895) reports the case of a man whom he first saw on March 15, complaining of general malaise, rheumatic pains (attributed to a chill), and some stiffness of the jaw. On March

19 there were decided symptoms of tetanus—risus sardonicus, opisthotonos, rigidity of the lower limbs. There was no history of injury and no recent scar. The only supposed cause was a chill three or four days before, when the patient was suffering from aphthous stomatitis. On March 23 the patient was worse, speech was hardly intelligible, the finger could not be introduced into the mouth, and tetanic spasms occurred—about 20 every hour. Tizzoni then saw the patient, and injected 30 c.cm. of antitoxin serum (of 1 to 10 mil. immunizing powder) prepared by him and taken from a horse two days previously. On March 24 the patient was better, the spasms were less intense, less frequent and less painful. The injection was followed by a copious eruption of urticaria, rise of temperature (39 degrees C.), and profuse sweating. Injections of 10 c. cm. were made on the 24th, 25th and 26th, and were also followed by urticaria and raised temperature, but to a less degree. After the injections were begun the patient steadily improved, so that on April 1 the abdominal walls were relaxed. On April 5 mastication was possible, and on April 8 recovery was complete and he was able to leave his bed. Sedative injections of morphine were used as supplementary aids to the antitoxin treatment.

POTASSIUM IODIDE AND IMMUNITY OF CATTLE AGAINST FOOT-AND MOUTH DISEASE.

Pick (Centralbl. f. Baht., u. Parasitk., March 23, 1895) publishes some facts which appear to show that the administration of potassium iodide to cattle produces immunity against foot and mouth disease. Whilst the author was making experiments on two cows in order to obtain iodized milk for therapeutic use an epidemic of foot-and-mouth disease occurred. One case had been receiving 12 grammes of potassium iodide daily for eight weeks, the other cow the same quantity for 10 weeks, when the disease broke out in the stable in which these cows, along with 68 other cows, were kept. The disease spread rapidly and, as is the custom in such cases, in order to shorten the epidemic all the cattle were subjected to injection by wiping out the mouth cavity of the diseased cows with a cloth, and then bringing it in contact with the mouths of the healthy animals. The result was that all the cattle suffered from the disease except the two cows which had been treated with potassium iodide. Though these were subjected to the same procedure as the rest they remained unaffected by the disease. These two cows were not isolated from the others, and the cows to the right and to the left (in the stable) suffered from the disease. In spite of the usual precautions the cows in the second stable were all affected with the disease. As the predisposition from the disease amongst cattle is very great and general, and as both the iodised cows had certainly not suffered from the disease previously; and further, as neither in the manner of feeding nor in the external conditions was there any difference, the author believes that immunity was due to the use of the potassium iodide.

FOR FLATULENCE.

When flatulence is associated with pain after food and a coated tongue indicating gastritis, the following prescription should be given:

Potassii Bicarb. vel Sodii Bicarb. dr. ij
Sp. Ammon. Arom. dr. jss.
Liq. Strychninæ M xxx.
Sp. Armoraciæ Co. vel Sp. Cajuputi dr. ij.
Sp. Chloroformi dr. j.
Infus. Calumbæ vel Gentianæ Co.* ad oz. vj.

M. ft. mist. A sixth part three times a day between meals.—S. Mackenzie in London Practitioner.

SOME USES OF SALICYLATE OF SODA.

The power of salicylate of soda as a cholagogue is apt to be forgotten. Yet its action as a hepatic stimulant has been studied by Rutherford Blanchier and Lewascheff, and confirmed by experimental research. As an analgesic there are frequently

cases of sciatica, cerebral rheumatism, hemicrania, etc., where the preparations of salicylic acid, and particularly the salicylate of soda, will render real and useful services. In attacks of migraine the latter salt may be thus prescribed:

R—Sodæ Salicylat. grs. xx.
Caffein. Citrat. Effervesc. dr. ij.

Ft. Dosis. To be taken in half a wineglass of water, and repeated every two or three hours until the headache is relieved.

A useful mixture in acute bronchitis contains salicylate of soda, as suggested in the Semaine Medicale (Jan. 9, 1895):

R—Sod. Salicylat. dr. j.
Ammom. Carb. dr. j.
Tinct. Camph. Co. dr. j.
Syrup. Aurantii oz. ss.
Syrup. Tolut. oz. ss.
Aq. ad oz. iv.

Ft. Mist. S. A dessertspoonful every three hours.

As a deodoriser in cancer of the uterus:

R—Acid. Salicyclic. grs. vj.
Sod. Salicylat. dr. iij.
Tinct. Eucalypt. dr. vj.
Aq. Destill. ad oz. vj.

S. Two or three tablespoonfuls to a pint of water as an injection.—London Practitioner.

THE NEW YORK CITY BOARD OF HEALTH.

Dr. Cyrus Edson's resignation from the board seems to have been demanded of him in a manner that left him no alternative to the course he has taken, that of sending it in in a form to take effect at once rather than at the Mayor's pleasure. The appointment of Dr. George B. Fowler to succeed him was not, so far as we are aware, among the things that were generally expected, but this at least may be said of it, that it is reasonably sure not to lead to acerbity in the board's proceedings. It is to be hoped that the board is not to lose the services of its president, Mr. Wilson, who is undoubtedly better fitted for the office than any other eligible man who could be found to fill it—to be eligible, one must not be a member of the medical profession!—N. Y. Med. Jour.

SCIENTIFIC HOUSEWIFE.

Give me a spoon of oleo, ma,
And the sodium alkali,
For I'm going to make a pie, mamma,
I'm going to make a pie;
For John will be hungry and tired, ma,
And his tissues will decompose—
So give me a gramme of phosphate,
And the carbon and cellulose.

Now, give me a chunk of casein, ma,
To shorten the thermic fat;
And hand me the oxygen bottle, ma,
And look at the thermostat;
And if the electric oven's cold,
Just turn it on half an ohm,
For I want to have supper ready,
As soon as John comes home.

Now, pass me the neutral dope, mamma,
And rotate the mixing machine,
But give me the sterilized water first
And the oleomargarine,
And the phosphate too, for, now I think,
The new typewriter's quit,
And John will need more phosphate food
To help his brain a bit.

—Chicago News.

The Index Medicus, of Washington, has suspended publication.

Correspondence.

Editor "Times and Register:"—From many sources I have received circulars which had been distributed by the Oakland Chemical Company and the senders, according to the accompanying letters, appear to be impressed that the Oakland Chemical Company in these circulars seem to depreciate the value of my analyses. I take the liberty to inform you that my report on the real value of the different brands of peroxide of hydrogen, which was published by the "Times and Register," December 15, 1894, is correct from beginning to end. I will further say that the analyses of the O. C. Peroxide of hydrogen medicinal, published by the same paper June 1, 1895, are also correct.

It merely shows that the first samples bought and tested by me in November, 1894, contained soluble barium salts, and that the samples bought and tested in May, 1895, did not contain them.

Very respectfully,
H. ENDEMANN.

New York, July 1, 1895.

The Times and Register.

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ROYAL COLLEGE OF SURGEONS OF ENGLAND
-6 AUG 95

Original.

ON A NEW AND IMPORTANT PLAN OF TREATMENT FOR NARCOTIC HABITUES.

BY EDWARD C. MANN, M. D., F. S. S., NEW YORK.

Med. Supt. Sunnyside Private Hospital for Nervous and Mental Diseases. Hon. Mem. Scientific Section, Imperial University, Kharkiff, Russia; Gold Medallist Soc. Science, Letters and Art, of London; Member Med. Soc. Co. of N. Y., Brooklyn Pathological Society, Etc., Etc.

The successful treatment of many cases of morphia habit has convinced the writer that a cure of this habit or disease will be only accomplished as a rule under hospital restraint and environment. While the patient under treatment at home is assuring the family physician that he or she is taking no morphia, the fact is that they are nearly all taking it secretly and many are the subterfuges resorted to to deceive the family and the family physician. The morphine habituate has two courses open to him. The first is to go to some well-regulated public or private hospital and be cured. The second is to stay at home, continue the use of the poison, and die either of a progressive cachexia or suddenly perhaps, as many of these patients die, by sudden stoppage of the heart's action. A few years ago the cure of the morphine habit was attended with much suffering to the patient, as he was weaned from the use of the drug. To-day it is perfectly possible for a patient to be cured perfectly of the morphia habit not only without suffering but being actually unaware of the time when the morphia is discontinued. This statement is based on the treatment and analysis of 153 cases of morphia habit treated at our private hospital during the past few years.

The first point in treatment is to build up the centric nervous system. Our patient is very apt to be a wreck, although while under the influence of morphine there may be an artificial, temporary health that may deceive an unprofessional observer. In reality, however, the clergyman who is an opium habituate cannot write or deliver his sermon without it; the lawyer who uses it cannot try a case without it; the physician who is an habituate cannot perform his professional duties without it; the society woman who takes it will disappear for a few moments each evening, make her puncture and reappear beaming and smiling and with shining eyes and heightened color, when a few minutes before pallor, pain and distress could be clearly seen by a practiced physician. One of the heaviest operators on a Western produce exchange, who was discharged cured a few months ago, told us that he could not trust his judgment to buy and sell grain until he had taken his usual hypodermic of morphia.

We primarily, in the treatment of these cases, pay the most careful attention to the due nutrition, stimulation and repose of the brain. We build up the vesicular neurine of the brain. We build up the little cells in the cortex of the cerebrum and cerebellum by furnishing them with an artificial lecithin made in our laboratory, the formula of which is $C^{44}H^{90}NPO^{9}$. By means of this glycero phosphate, which we use hypodermatically, we maintain in a healthy and regular state the conditions of the reparation of the nerve substance of the brain, and rapidly remove the morphine neurasthenia

which has made the patient a wreck.

There is more morphine neurasthenia to-day in the higher circles of society than is dreamed of. The drug is not taken for any liking for it. It is taken to relieve the terrible suffering which the patient suffers from when deprived of his customary allowance of the drug and is trying, perhaps most honestly, to free himself unassisted from the bondage of the morphine habit. He does not succeed, for the simple reason that no one can succeed without proper medical assistance, and there is no environment that will cure him but a proper public or private hospital environment. There is a perversion of the functions of the structures of the body, and there is no disease requiring more skill on the part of the physician than the care and cure of a case of a narcotic habitue.

The great reason why there are so many relapses is that there are so few physicians who have given any care and thought to the cure of this habit or disease. The patient is told to "stop it." You might as well try to stop Niagara Falls. The patient has no will-power; he is a wreck. He wants to be cured, but he does not wish to have it known that he is addicted to the use of the drug, and instead of manfully coming out and saying, "Take me and cure me," he keeps his habit a secret and dies of a progressive cachexia if not suddenly by stoppage of the heart's action. The reason for failures in treatment may be found in the failure to provide the patient with the proper chemic nerve cell and nerve tissue food which is the true physiologic antagonist to the morphine neurasthenia. If the blood capillary can be made to exude a plasma in which the brain cell is bathed and renovated, and from which new cells are formed to replace those which are finally exhausted, such a chemico-physiologic plan of treatment is not only going to help us to cure our patient, but he is not going to have a relapse. It is the ignoring of some of the plainest truths of physiology on the part of those physicians who treat the morphine habit that allow their patient to relapse. There are many good pathologists who are far from being good therapeutists in clinical medicine. In morphine neurasthenia the patient cannot do either physically or mentally what he could do in health. We have to remove and cure the mental depression, neuralgia, loss of energy, lassitude and insomnia, as well as the craving for morphia. This can be done and the day is past when a case of morphia habit has to go through a course of suffering as well as a course of medical treatment to be cured of this formidable disease.

Private Hospital.
305 West 86th st.,
Hotel Kensington, New York,
Fifth ave. and 17th st. 11 to 3 daily.

BURNS OF THE CORNEA; ELECTRIC LIGHT EXPLOSION CAUSING TEMPORARY BLINDNESS; TRAUMATIC INJURIES TO EYES—HYPOPYON.*

BY L. WEBSTER FOX, M. D.,
Professor of Opthalmology, Medico-Chirurgical College, Philadelphia, Penna.

BURNS OF THE CORNEA.

The boy whom I bring before you first this morning met with a most serious accident last evening. While standing on the sidewalk watching a civic parade he accidentally had a Roman candle explode in his face; he received the full discharge, burning his lashes and eyebrows and scorching the skin about his eyes. The left one received the greater part of the flame, and, in consequence, is the more severely injured. The accident happened about 8 o'clock, and he was brought to the hospital a few minutes later. The house surgeon, Dr. Pfromm, immediately instilled atropia and bathed the eyes with a boric solution. I was called to see the case and made an examination about two hours after the accident. Upon elevating the eyelids I found both eyes more or less sprinkled with grains of powder and fine particles of clay, notwithstanding the treatment. Both eyes were again thoroughly irrigated

*Extract by request from the July Medical Bulletin.

with filtered water, so as to wash away the fine particles of foreign matter remaining in both cornea and conjunctiva. Plenty of water was applied by means of our hydrostatic eye-douche. Atropia was again instilled and both eyes sealed with sterilized vaselin; over this came the eye pads, all held securely in place by adhesive strips. The patient was not disturbed during the night, and we now, in your presence, make another examination. I find, upon removing the pads, that the eyelids are somewhat swollen, red, and showing distinctly the effects of the burns. Upon elevating the upper lid of the right eye the conjunctiva is pink, and on the cornea a few imbedded particles of foreign matter still remain; these we shall wash away with water as hot as can be borne by our patient. You will notice how this is done: the reservoir is held to a certain height, to give the water at the nozzle of the pipette greater force. I find that we have succeeded in washing away the particles, and the surface of the cornea appears perfectly clean. The left eye is in a more critical condition, the upper third of the cornea showing the effects of the burn, being quite opalescent and with a decidedly lacerated surface, as if the particles of foreign matter had torn away the epithelium and destroyed part of the cornea propria. I shall irrigate this eye with the warm water even more carefully than was done in the other eye, so as to be sure to wash away all the foreign matter and, possibly, remove the lacerated tissues hanging on by shreds. The atropia is again dropped into the eyes and both eyes again sealed by a thick coating of sterilized vaselin and eye-pads. The eyes will be dressed again in 12 hours and continued until all danger is past. The prognosis in the right eye promises well. In the left we must reserve our opinion for 48 hours. Burns from fire, alkalies, or acids are always deceptive, and in no case should you give a positive opinion as to the prognosis until several days after the accident.

I again wish to call your attention to the treatment of gunpowder burns in the face and eyes. One line of treatment is to try to pick off the grains of powder from the cornea or the face with a spud. This is a dangerous procedure and it is simply impossible to get away all the powder, while in your efforts to relieve the patient you make matters worse by irritating the already-damaged cornea. What must be done is, first, to wash the face with hot water; use it freely. The water will enter the small openings in the face and dissolve the grains of powder, and the excessive fluid will cleanse the parts thoroughly. After the face is cleansed attend to the eyes. Keep the lids apart with speculum, and with the eye-douche irrigate the eyeballs. The patient will at first try to evade the full stream by rolling his eyes upward, but in a short time he will roll both eyes downward and you will then see the good results of this procedure. The force of the stream may be thrown against the cornea. This playing the water against the eyeball may be kept up at intervals of every few minutes, until you feel that you have done all at one sitting that is fairly consistent with the comfort of the patient. Atropia is again instilled in both eyes, if affected, and both are sealed with sterilized vaselin and eye-pads. In 12 hours the cleansing process may be repeated.

I have had three cases within the last two years where this line of treatment was followed out, and it has proven itself entirely satisfactory, very little or no injury to the sight and very little or no tattooing of the face resulting. I hope, gentlemen, that you will remember this, as I know of no treatment equal to it in just such serious cases of which this boy is an example.

Gunpowder explosions constitute only one of a series of accidents which may come under your observation and demand your skill—boiling water, mortar, melted fat, the many acids (particularly sulphuric acid), caustic potash, explosions from kerosene-lamps or from gas, etc. In some of these accidents the cornea may escape and the conjunctiva only receive the injury. I have in mind a case where the conjunctiva was de-

stroyed by quicklime. It first assumed a white, swollen appearance, and in a few days the cornea became infiltrated; and, in spite of the most active treatment, the cornea sloughed and the eye was lost, ten days after the accident.

A woman presented herself at the clinic last summer who accidentally received a drop of whitewash in her eye. The hyper secretion of tears washed away most of the lime, yet sufficient remained behind to provoke a most serious condition. By placing the patient in bed, keeping on hot pads (which is good treatment after active inflammation has set in), and instillations of eserine, gr. 1-4 to 2 dr. every two hours, the eye was saved with fairly good vision.

When the cornea is touched by a gas flame, hot iron, curling iron, or melted lead the epithelium of the cornea is whitened, coagulated like a layer of albumin, and raised like a blister; this part of the eye is always sure to desquamate. If the burn have extended into the deeper layers of the cornea we may look for very serious complications, and tedious ulceration even going on to perforation of the cornea. Staphyloma may develop and the vision be lost.

To show you the result of the caustic-potash burn I have asked this little patient to come before the class. She is now 9 years of age. Several years ago she accidentally rubbed a certain quantity of potash (caustic) into both eyes. Her father is a dairyman, and on this occasion had a small open can of this strong alkali standing near some milk-cans which he used in their cleansing. The little girl, then 5 years of age (the accident happened February 23, 1890), got the alkali and somehow rubbed this substance into both eyes, enough to produce a very severe inflammation. As you notice, both eyelids have grown fast to the right eyeball (ankyloblepharon), but the growing fast of the eyelids has caused blindness to this eye. In the left eye the lower lid became attached to the cornea, causing symblepharon and also blindness. Finding a clear part of the cornea toward the upper and inner quadrant, and hoping that possibly by separating the eyelids more corneal space could be obtained, I separated the lower lid and transplanted the conjunctiva of the rabbit. I simply have to show you the eye to prove the success of the operation. The child is now able to attend school and can follow her studies fairly well. At some future time I may attempt to separate both eyelids from the other eyeball and transplant the skin of the frog, which in the hands of certain operators has been successful.

This man, who has been referred to the clinic by Dr. Muhlenberg, of Reading, is almost a parallel case—an explosion of hot metal burning both eyes and eyelids—the left eye is completely closed and both lids fastened to the eyeball, causing blindness. The left lower lid is attached to the cornea of the left eye; upon examination I find that very little cornea is free, enough, however, after separating the eyelid and performing an iridectomy, to give the patient some vision. I take it for granted that the crystalline lens is clear and the fundus normal*

To recapitulate treatment: In gunpowder explosions irrigate the eyes thoroughly with hot water, instill atropia and cocaine, anoint the eyelids with sterilized vaselin, cover this with eye-pads kept moistened with "Eye Lotion No. 2" of the Pharmacopeia of the Hospital, and so exclude the air. In burns from any flame use atropia up to 40 years of age (for you might provoke glaucoma after this age), eserine after 40. Vaselin-saturated eye-pads kept wet day and night.

For alkali burns apply oil or melted tallow, or unsalted butter when you cannot obtain vaselin, which is, however, almost always to be found in every household, and may take the place of the oils or tallow, butter or thick cream. Bathe the eyes with

* This patient was cured of symblepharon by separating the lower eyelid from the eyeball and covering the raw surface by transplanting a strip of conjunctiva taken from the upper part of the eyeball, leaving the one end attached to the eyeball to insure the circulation, and holding the other end of the graft by stitches. The iridectomy has not yet been performed.

our favorite lotion, which is composed of the following ingredients:

R—
Acidi borici .....20 gr.
Aq. menth. pip.....3 fl. dr.
Aq. camph.....2 fl. oz.
Aq. destil.....2 fl. oz.
M.—Eserine sulph., gr. ¼ to 3 dr., one dop every three hours.

I am sure that this drug will assist in saving the integrity of the cornea when all hope seems gone. Eserine reduces the tension and is also an antiseptic of considerable value.

Dry acids are more destructive and if any quantity is thrown into the eyes the cornea is destroyed immediately and you can hold out but very little hope to your patient. Diluted acids, while liable to cause trouble, are not so serious, and much may be done by using alkali waters immediately, such as salt water or boric acid solutions.

We may also add local depletions, such as leeching, and in some cases I am old-fashioned enough to try blood-letting at the arm. Under all circumstances the patient must be kept in bed and in a darkened room, and as a local anodyne we may use externally the extract of belladonna. Each and every case of burns to the eye must be a law unto itself, and I can only in a general way give you rules to follow in the treatment.

TEMPORARY BLINDNESS DUE TO ELECTRIC EXPLOSION.

The case which I show you now is one of particular interest. Three hours ago this man was blinded by a sudden explosion in a trolley-car. He was shunting the current, and, as you are aware, the current of electricity running through a trolley wire is a force of tremendous power, either for generating light or force. This man, as I remarked before, was shunting the current in his car, and he did it with a large, steel screw-driver. As soon as he made the connection there was a tremendous explosion, and the man was blinded by the terrific light produced, causing paralysis of the retina. He was brought to the hospital in this condition. Warm applications were immediately applied, and he was kept in a darkened room. In examining the eye I find nothing, apparently, the matter with the cornea; pupil widely dilated; the blood-vessels of the fundus oculi contracted; and the disc pale. He is now gradually regaining his vision; and while, at the present moment he could not possibly find his way home, yet in a few hours he will, in all probability, be fully restored to vision. Warm application is the treatment in such cases. Strong currents of electricity contract the blood vessels, causing a temporary paralysis of the coats of the arteries, suspending circulation, which causes blindness, and, where the granular layers of the retina are not destroyed, we may expect a restoration of vision.

Our experience in such cases, from the recent introduction of the trolley system, is very limited; but the very few cases on record show that only temporary blindness follows these accidents. If the current were to pass through the body death would surely follow.

A short time ago I had the opportunity of assisting in the electrocution of six dogs by the alternating current carried out by Professors Houston and Kennelly. The experiments were made to refute Dr. d'Arsonval's theory, that, in the electrocutions in New York State, death is not produced by the electric current, rather leaving the public to infer that it is produced by the knife of the surgeon in the autopsy which always follows. I made the ophthalmoscopical examination immediately after death, and at intervals of ten seconds until the blood-vessels almost entirely disappeared. The pupils were dilated to full mydriasis; the veins full; arteries attenuated, shrunken to less than normal width; the optic nerves full pink color; in a very few seconds the calibre of veins and arteries shrunk to hair-lines and the optic nerves became very white. All the dogs were again examined in ten or fifteen minutes, and at this time the fundus oculi was very pale and only the faintest traces of veins could be seen. In one dog death was not instantaneous and the circulation returned with the return of cor-

sciousness, when the current was turned on again until death; the same contraction of the blood-vessels took place, and in ten minutes faded away.

OPIUM AND ALCOHOL HABITUES—SOME POINTS IN TREATMENT.

One of the well-established therapeutic properties of the coca leaf is, that it increases the action of the glandular system and that of the kidneys and the skin.

It energizes the muscular system. It produces a lengthening of the respiratory act; has a sustaining effect; is antagonistic to the action of opium; is not only a temporary support to the shattered nervous system, but the tonic and sustaining properties of the leaf give renewed vigor.

It is of the utmost importance when we give a tonic to increase the appetite, that the digestive capacity be increased also, for if more food is taken than can be readily assimilated indigestion, with its attendant evils, is sure to be the result.

Whatever method of treatment may be used in treating opium and alcoholic habitues maltine with coca wine will prove an invaluable adjunct. In a considerable portion of the milder cases no other medicaments will be needed.

Many debilitated patients have a weak and uncertain voice. It is interesting to note the restored self-confidence that follows when the voice becomes firm and resonant as the result of taking maltine with coca wine. This is due to the coca being a tensor of the vocal chords. Nervous, anemic patients soon after beginning the use of this preparation voluntarily make the statement that they are feeling much better. They gain confidence and feel grateful to the physician for the prescription that has made them feel better.

After the patient has gotten over the habit of taking the drug to which he is addicted, his general sense of well-being increases in weight, and restored self-reliance will render it unnecessary to continue the maltine with coca wine for any great length of time. There is no danger of this preparation becoming a tipple, for it will be no longer needed after the patient is fully restored to health and it can be discontinued without effort. This is not true of the ordinary coca wines, which are merely diluted tinctures and have only the tonic effect of the coca and the stimulating effect of the alcohol, without the digestive principle. Maltine with coca wine is a medicinal preparation, not a beverage.

SEXUAL DEBILITY—THEIR CAUSES.

Dr. T. R. Sturgis in a recent number of Gaillards Med. Journal formulates the following:

1. That the cases of sexual debility which are marked by imperfect erections and by premature emissions are usually if not entirely due to hyperesthesia of some portion of the urethra.

2. That masturbation has very little, if anything, to do with it, beyond the fact that if indulged in to excess it may induce a tendency toward this hyperesthetic condition, but this is no more marked in masturbators than it is in those persons who indulge to excess in the venereal act.

3. That organic stricture has little, if anything, to do with it; but that associated with this hyperesthetic condition there is an irritable condition of the canal which produces spasmodic contractions of the urethra upon attempts to pass instruments, oftentimes during the first act of micturition and at the time of connection.

4. That varicocele plays no unimportant part in these cases.

5. That neuralgia of the testis, if a cause of this disease, induces it merely as a secondary consequence to the pain which is one of the distinguishing features of this disease.

6. That tuberculosis, syphilis and gonorrhea may also play ther part and should all be reckoned with in summing up the causes which may induce this peculiar and depressing condition of affairs.

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PHILADELPHIA, JULY 20, 1895.

THE TREATMENT OF HYDROCELE.

The treatment of hydrocele by the injection of irritating substances is sometimes very painful. The use of cocaine as a local anesthetic in the ordinary way not being free from danger, Nicaise has since 1889 (Acad. de Med., June 4; Sem. Med., June 5) employed the following method: The usual antiseptic precautions being taken, the hydrocele is punctured with an ordinary trocar; about one-third of the fluid is allowed to flow away, then 3 to 4 c.cm. of a 1 per cent. watery solution of cocaine is injected into the bulk of the serous effusion remaining in the sac, through the cannula of the trocar with a syringe of the capacity of 4 c.cm. The scrotum is then gently manipulated, and after waiting four or five minutes the remainder of the serous fluid is drawn off. Next tincture of iodine, either pure, or mixed with one-third of water, according to the age of the hydrocele and that of the patient, is injected. The scrotum is again gently manipulated, and after four or five minutes the iodine is allowed to escape. The operation done in this manner is painless. The method has the advantage of utilizing a natural aseptic fluid as the excipient of the injection. Moreover, the quantity of cocaine absorbed by the serous surface is less in the case of a serous solution than of a watery solution of the medicament of the same strength.

MODERN THERAPY OF GASTRIC DISEASES.

Perhaps no one of the hollow viscera of the digestive system has been the centre of such an extended study of experimental research (chemical, physiological and biological) as the stomach.

With the advances of science and the better facilities which late inventions have made possible, more complete and exact observations are being made of vital phenomena.

Bacteriological studies have enabled us to ferret out and diagnose disordered conditions of the stomach with a certainty and precision quite exact and definite.

The physical diagnosis of gastric maladies has been broadly expanded, both internally through the interior of the alimentary tract and from without by direct incision on to the nude walls.

Gastroscopy, gastrothermy, illumination and internal exploration have been proven safe and practicable. Lavage, massage, electrization and direct local application to the glandular and muscular tissues are now, in the hands of those specially trained, current modes of treatment.

What direct surgery has accomplished in various pathological conditions of the stomach is simply stupendous.

No longer need we look passively on the victim of esophageal or pyloric stenosis suffering from the agonizing pangs of hunger.

By the safe, rapid and effectual procedures of a gastrostomy or a gas-

tro-enterostomy, we either pass below the obstruction or get around it, and once more re-establish the intestinal current. In the perforating ulcer of tubercle the inevitable mortal end by infective peritonitis when left to itself is now replaced in many cases by prompt surgery, the repair of the vent and recovery of the patient.

Taken alone the progress made during the past ten years in the management of stomach lesions constitutes one of the most brilliant epochs in the history of medical science, and impresses on us the lesson that in order to give our patient the full benefit of the latest and best in the way of treatment our endeavors to require knowledge must be persistent and incessant.

ALKALINITY OF THE BLOOD AND INFECTION.

Josef V. Fodor (Centralbl. f. Bakt. u. Parasitenk, February 28, 1895) records a number of experiments showing the influence of the alkalinity of the blood on diseases produced by micro-organisms. Four series of experiments on animals are first reported which show clearly that, by the administration of alkalies (sodium bicarbonate by the mouth or by subcutaneous injection), the power of resistance against infection with cultures of anthrax bacilli is greatly increased. The normal alkalinity of the blood was determined by the examination of 76 healthy rabbits, and four experiments are reported showing the increase in the alkalinity of the blood which occurs after the administration of sodium bicarbonate. The author then records the results of a large number of observations on the alkalinity of the blood in rabbits after infection with the bacilli of anthrax, cholera, typhoid fever, tuberculosis and erysipelas. These observations show that in the living organism, after infection with certain bacilli, there is first an increase of the alkalinity of the blood and then a diminution of the same, more or less. If the infection is fatal, the diminution of the alkalinity is marked and progressive; if not fatal, the diminution is slight, and is followed by an increase of the same, in consequence of which the alkalinity of the blood becomes permanently higher than before the infection. Thus there exists a connection between the pathological action of certain bacteria and the alkalinity of the blood. Those rabbits, having the greater alkalinity of the blood, as well as those in which the alkalinity of the blood is increased to a greater extent after infection, have greater power of resistance against certain infectious organisms (anthrax bacilli) than the rabbits in which the alkalinity of the blood is less. It appears, therefore, that the degree of alkalinity of the blood, as well as the power of the organism to increase this alkalinity with corresponding intensity after infection, is of essential influence upon immunity.

Surgery.

IN CHARGE OF

DR. T. H. MANLEY, New York.

EXPLORATORY PUNCTURE OF AN OVARIAN CYST—INTRA CYSTIC HEMORRHAGE AND DEATH.

BY DR. ANDRE BOURSIER.

On the 26th of last May I was called to the country by M. Arnaud to see in consultation one of his patients, Mme. S—, who was suffering from a voluminous abdominal tumor. I had seen her two years before at my clinic.

On the 26th of July, 1891, Mme., age 48 years, presented herself to me complaining of a painful enlargement of abdomen, which she had noticed for some months.

At her menstrual periods she bled profusely, but lost none during the intervals. She suffered from pain and frequently vomited. I found a tumor piped in the pelvis, rather inclined to the right side.

Her case was diagnosed then as a uterine fibroid, for which electricity was employed, but with no benefit. I lost sight of her until now, when

I found her in a very depressed state of health.

Now, she was greatly emaciated, and her tumor had enormously enlarged. This, she said, ensued subsequent to a fall in her garden the January before. Now, the character of the tumor had entirely changed. Fluctuation was distinct, as the position was changed. As she was in a greatly reduced state, quite unable to sustain the shock of an operation for the entire removal of the tumor, and as her respiration was greatly embarrassed by pressure up against the diaphragm, I was decided to tap and draw away some of the fluid. The abdomen was prepared and a Dieulafoy aspirator-needle introduced in the median line, between the navel and pelvis. About six litres—nearly two gallons—of a thick, syrupy, hard fluid were evacuated. Abdominal tension was immediately relieved, and she breathed much easier.

Now, the trocar was removed and a collodion dressing applied. While applying the binder it was observed that she suddenly fainted and became almost pulseless.

Immediately restoratives were applied and she soon revived a little.

On examining the abdomen it was apparent that there had been an enormous intra-cystic hemorrhage,for the tumor was larger than ever. She remained semi-comatose for several hours, never completely reacting, and sank in the evening from progressive exsanguination.—(12 Mai.) '95, Gazette de Gynecologie.

(Note by translator)—The author enters at some length into the literature of this accident, but does not tell us whether he made a necropsy.

T. H. M.

TREATMENT OF CANCER OF THE UTERUS BY INJECTIONS OF SALICYLIC ACID.

In seven cases of cancer of the uterus, M. Fafiero had recourse to intra-parenclymatous injections of a solution of salicylic acid, 60.100, prepared with alcohol 60.100 proof. The solution, in a vial, is placed in warm water to dissolve the crystals, just before using, and should be kept sheltered from the light. The vagina should be thoroughly sterilized before using the injection. The vagina is now widely opened and the injection begun, penetrating about three centimetres into the growth. With the first puncture there is much hemorrhage, but after this little blood escapes. After each treatment a pledget of iodoform gauze is passed in and retained. The patient should remain in bed all day. On the following day the vagina is irrigated and fresh dressing applied. These injection are painful at first, though this passes off early.—Gaz. de Gyn, Mai. '95.

ORGANO-THERAPY.

The glands may be divided into two categories: First, those which neutralize and abstract certain toxic elements of the blood. If one of these glands be extirpated we will soon have evidence of serious disturbance with the general health. These glands are anti-toxic: as the liver, the pancreus, the thyroid; probably, too, the pituitary, the thyneus, supra-renal and the kidneys.

The vivifying glands are the spleen and testis, which are known to exercise a position of influence on the production of pepsein and trypsein, as demonstrated by Schiff and Herzen; the testicle, as is well known, to profoundly influence physical phenomena. Schiff and others have demonstrated that when one of these organs thus undergoes extensive organic changes, and, in consequence, the general health is threatened, much may be accomplished by a substitution of their elements derived from the lower animals.

Notably with the thyroid, the pancreas or the testis; hence, organo-therapy, which with sero-theraphy, has so lately come in the field and threatens polypharmacy. The legitimate field of organo-therapy is a wide one, but with definite limitations. It rather embraces those maladies dependent on parenclymatous degeneration and atrophy of organs, than those dependent on environ-

ments, season, bacteria, etc. Serumtherapy promises to revolutionize the entire foundations of therapeutics. Its immunizing and curative powers are as yet but little understood, though with the stupendous progress which it has lately made we may soon probably look to this potent agent to meet, to resist and suppress any contagious malady at its outset.

BY DR. CORUBO.

(Suisse-Medicale, Mai., '5).

Electro-Therapeutics.

IN CHARGE OF
DR. S. H. MONELL, New York.

STATIC ELECTRICITY.

Article 1.

That a widespread interest or at least curiosity exists in regard to static electricity even among physicians to whom it has been a terra incognita is proved by numerous inquiries for information in regard to it. "Can you direct me where to obtain literature upon this subject?" is a frequent question in my medical corespondence, and I have not hitherto known of any reliable textbook or monograph to refer to in reply. Static is incidentally described in most works upon galvanism and faradism, but it has so far had no exclusive treatise of its own. From time to time during the past two or three years I have made modest contributions to the meagre literature upon this valuable form of electric manifestation and its therapeutic uses. In response to repeated requests five of my various articles have been lately published together in pamphlet form, and may be procured from the Galvano Faradic Manufacturing Company of New York.

The title, "Practical Chapters on Static Electricity," indicates that it is devoted entirely to informaton of practical interest to the reader without wearisome details upon experiments and discoveries from Thales to date, and long accounts of early experimental, but long since obsolete static machines. Physiological action of the current and methods of administration are set forth as fully as the nature of the work would allow. Other chapters relate to therapeutics and to a determination of the oft-repeated and much-disputed question of the real value of this remarkable agent. The opinions of a considerable number of authors are quoted, whether favorable or unfavorable, and the reader can form his own conclusions after perusing the first chapter. The next four installments in this department will be devoted to selections from this monograph relating especially to physiological action and methods of administration.

Endowed with high potential, and extremely deficient in volume, the physiological effects of static electricity are chiefly modifications of the ordinary vital processes without electrolytic alterations. Static electricity may increase, diminish, arrest or otherwise modify these functional processes. It affects secretion, excretion, absorption, reflex action, sleep, respiration, circulation and nutrition. Owing to its enormous E. M. F. and its power of condensation and accumulation it possesses great diffusiveness, which enables it to affect the entire system in a limited degree.

In 1777 and 1781 there were published in London editions of a treatise on medical electricity, by Tiberius Cavallo, in whch are recorded all that was known in his time of the subject in hand. The discerning observations here quoted were made at least 10 years before the first foreshadowing of Galvani's discovery of a current with chemical and electrolytic properties; and they are not only remarkable for their accuracy, but for the fact that little has been added to them since. Mr. Cavallo recites as follows:

"The remarks made by philosophers relating to the effects of (static) electricity upon the human body in general, are the following, viz., that by electrization, whether positive or negative, the pulse of a person is quickened, the number of pulsations being generally increased about one-

sixth; and that glandular secretions and the insensible perspiration are promoted and often restored when they have been entirely obstructed. It might naturally be suspected that the promotion of perspiration and of glandular secretion was only the consequence of the accelerated pulse and not the immediate effect of electricity; but the contrary is easily proved by observing that in various cases the quickening of the pulse by other means, as fear, exercise, etc., does not promote those secretions nearly so much, if at all, as electrization, and also the glandular secretions and perspiration are often promoted by electricity when applied only to a particular part of the body, in which case it seldom, if ever, accelerates the pulse. Hitherto it has been discovered that (static) electricity acts within the human body by any chemical property, as most medicines generally do; but its action by which it produces the above-mentioned effects may be considered merely as a mechanical stimulation, for it seems to act as such even within those parts of the body which, especially when diseased, are mostly out of the reach of other remedies....From these observations it appears that the application of (static) electricity does not merely promote any discharge or circulation of fluids, but rather assists the vis vitae, or that innate endeavor by which nature tends to restore the sound state. It may, perhaps, be ever difficult to explain in what manner electricty assists that natural endeavor, but experience shows the certainty of the fact, and with it we must be gratefully content; for we may apply the effects to our wants, though we may be ignorant of their cause and mode of action.

"When an electric shock is sent through any part of the body an instantaneous involuntary motion is occasioned, which shows that the muscular fibres through which the shock is sent are expanded or in some other manner convulsed. This involuntary motion is also occasioned by sparks. Farther, when a shock is sent through several substances besides the human body, a tremulous motion and an expansion is evidently occasioned, as may be shown by many experiments. Now all these observations may perhaps in a manner explain the action of electricity upon the organized parts of an animal body by comparing it with the tremulous motion given to tubes of any sort through which fluids are transmitted, in order to accelerate their passage or prevent any stoppage or stagnation which might occur."

About a hundred years later a French writer, Dr. A. Arthuis (1871), summed up the physiological effects of static electricity as follows:

"It induces an acceleration of the pulse, it is singularly calmant, eases the respiration, develops animal heat, augments cutaneous transpiration, makes more active the urinary secretion, disperses nervous irritation, and gives tone to the whole organism. It is the great dispenser of equilibrium to the disturbed balance of the system, it increases the vital forces, and augments the energy of absorption. In a word, it excites and facilitates the play of all the functions. It is regarded by those who use it as the greatest regulator of menstruation. The well-being which it instantaneously produces causes those who have once experienced it to wish for a repetition of its beneficient effects."

When, 140 years ago, it was discovered by the Abbe Menon that the human body loses weight by being continuously electrified for five or six hours, he attributed the loss to the increase of insensible perspiration and tissue change. We now say about the same thing in somewhat different language. The teachings of modern investigation upon this subject may be fairly stated in the following terms: "Static electricity increases the excretion of urea, and lessens the uric acid in the system by promoting oxidation. It increases both the appetite and the body weight when the latter has been reduced by impaired nutrition. It lowers the blood pressure. In 10 to 15 minutes of general electrification, or a few minutes of sparks to the spine, a gentle perspiration ensues, accompanied by a feel-

ing of well-being. When this reaction has been reached the sitting may be ended for the day in ordinary treatment. Under the influence of static electricity the heart-beats undergo a change, viz., if slow, they may increase 10 to 20 beats per minute; or, if too fast, they may be reduced in number. It tends to regulate functionally deranged temperature. Many cases of neurotic, neurasthenic and melancholic conditions are found to have subnormal temperatures (97 to 97 1-2 degrees) before electrification. These states it adjusts to normal, and the patients then usually improve.

The static spark causes groups of muscles to jump. It is a most powerful stimulus to nerve and muscle function, and rapidly imparts tonicity, lightness, buoyancy and firmness to soft, lax and enfeebled muscular substance. It first causes a vasomotor constriction, blanching the skin. This soon gives place to a dilatation, and the spot gets red. Frequently a weal is raised, with a temporary sense of tingling and irritation, which will quickly pass away or be instantly removed by rubbing the part with a little toilet powder. If sparks are applied with sufficient persistence to the same area a mild papular eruption will often be caused.

Devoid as it is of electrolytic action, the power of static electricity seems to be chiefly manifested as a regulator of functions. It tends to adjust to normal action the heart, respiration, pulse, temperature, oxidation, secretion, excretion, nervous irritability and sleep. It increases metabolism so that a person can absorb more oxygen; and this mere improvement in nutrition is a vast power for good, and alone suffices to correct many morbid states; as gout, rheumatism, neurasthenia, neuralgia, anemia and various symptomatic derangements.

The spark, by its powerful mechanical disturbance, sets up a great molecular change and acts as a stimulating massage. It thus affects the nutrition of a part, disperses exudation material, and promotes absorption. Thickenings of joints, tendons and muscles, localized edemias, effusions, etc., are reduced by strong, thick static sparks. With fine, rapid frictional sparks may be obtained the beneficial effects of counter-irritation upon the skin; and with a special electrode a blister may be created in from one to four minutes, if desired. Sedative or stimulating effects are equally under the operator's control, and may be obtained at will. Many varieties of pain are promptly relieved by some form of static electricity; and, if not due to an incurable or persisting cause, it is well-nigh certain that the pain-killing property of this agent will give permanent relief, if treatment is persevered in long enough."

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ELECTROLYSIS IN DETACHMENT OF THE RETINA.

Terson (Presse Med., May 11, 1895) communicates to the Societe Francaise d'Ophtalmologie observations on 12 cases of retinal detachment treated by electrolysis. He uses fine platinum-iridium electrodes, and introduces the positive pole through a sclerotic opening as small as possible at the seat of the detachment. The positive pole is to be preferred, as in aneurism, on account of its hemostatic properties. Terson insists on the necessity of attention to the measurement of the current, that five or six milliamperes be not exceeded, and that the duration of the operation do not extend over one minute. The results he has obtained in the 12 cases are as follows: 1, an old case of 3 years' standing, was made worse, two were unaffected, five were temporarily improved, five considerably improved, and one case was cured. This was a myopic woman of 38 years of age, having for eight days a detachment of more than a fourth of the lower part of the retina and almost total blindness. The vitreous was turbid; 48 hours after a single application of the positive pole for one minute the retina was found to be completely replaced and the vitreous humor cleared. An examiantion nine months later showed no relapse of the detachment, and with—12 D the vis-

ion was one-tenth. Terson concludes: (1) That electroylsis with the positive pole is a suitable and hopeful treatment in recent cases of retinal detachment, and that the prospect of success is greater in proportion as the operation is done early. (2) That there is nothing in electrolysis incompatible with the ordinary accessory modes of treatment.

Medicine.

IN CHARGE OF
DR. E. W. BING, Chester, Pa.

ANTIVENIN, THE LATEST CONTRIBUTION TO SERUM-THERAPY.

According to the Press and Circular, June 12, Dr. Thomas R. Fraser, professor of materia medica in the University of Edinburgh, has made a very significant announcement regarding his original work with serpent poisons. Early in the month of June Dr. Fraser read a paper before the Royal Society, showing that animals may be immunized against the venom of the cobra as well as other serpents. He also showed that antidotal properties inhere in the blood serum of such immunized animals. Dr Fraser opened his paper with a historical account of the beliefs and traditions of the Hindoos and others, that poisonous serpents are self-immunized by some result of the absorption of their venom.

Since the year 1889 Dr. Fraser has been in receipt, from different parts of the globe, of supplies of snake poison, especially of the Indian cobra, and with this had performed many experiments on animals in the hope of producing immunity. The results he obtained passed his most sanguine expectations.

Continuing its abstract of Dr. Fraser's paper the Press and Circular says:

"Experimenting on rabbits, among others animals, he first satisfied himself as to the amount of the poison which constituted the minimum lethal dose. He then proceeded to inject quantities below this amount, and found that he could gradually increase them to 50 times the dose originally fatal. But not only that, for a buck rabbit, which he exhibited, and which was then in about the 140th day of treatment, had gained enormously in weight, from 2000 grams to 3000 grams, and had increased greatly in strength, and especially in virile power. Again, he found that the mixture of 1-240 cc. of serum obtained from a rabbit immunized to 30 times the minimum lethal dose with cobra venom averted a fatal result on injection, while the injection of a similar serum half an hour after the injection of a venom which otherwise proved fatal in one hour, promptly stopped the symptoms which had already commenced, and saved the life of the animal. He called this protective serum by the name of 'Antivenin.' He also mentioned as an interesting fact that the rabbit above referred to had received during the months of treatment enough cobra poison to kill two horses, or about 280 rabbits if unprotected. Not only are Dr. Fraser's results of the greatest value for the treatment of snake bite in India and other tropical countries, but, as he himself remarked, they possess a deeper significance in accentuating, as they do, the wonderful progress made in serum-therapy during the last few years, and are an earnest of still more wonderful discoveries yet to be made in the same direction. It appears also that immunizing an animal with the venom of one kind of serpent protects it from the poison of other species."

In conclusion, it may be said that Dr. Fraser is well known for his original investigations concerning calabar bean and the other ordeal poisons of West Africa. We may confidently predict that his findings will be confirmed.—Journal A. M. A.

SPASTIC RIGIDITY.

Haushalter (Rev. de Med., May 10, 1895) reports nine cases of various forms of nervous disorder in children in which spastic rigidity was a more or less prominent symptom, either alone or in association with athetoid or choreiform movements. While re-

cognizing the desirability of making distinct classes for congenital spastic rigidity, Friedreich's disease, and the hereditary cerebellar ataxy of Marie, he yet thinks that a series of cases could be arranged forming a transition from the one to the others. May not, he asks, a degenrative process in certain regions of the nervous system originating at different stages of development and associated with a congenital malformation, often hereditary, of certain parts of the nervous system—as, for instance, arrest of development of the pyramidal bundles—produce either a typical form or a transition form, according to whether it attacks one system or several at the same time? He suggests that the importance of the part played by difficult labor in the production of the conditions may have been exaggerated. Such a history is not always to be obtained; further, difficult labor is very common, while these nervous disorders are rare; moreover, spastic rigidity may come on quite late (at the age of 30, according to Bernhardt (Virch. Arch, 1891, p. 59); an analogous history has been reported by Tooth (Bart.'s Repts., 1892). Haushalter suggests that certain infectious diseases—syphilis, tuberculosis—or alcoholism or consanguity in the parents may be of more importance in the etiology.

EXTRACTS FROM

German Exchanges

IN CHARGE OF

DR. J. A. KRUG, Philadelphia, Pa.

MULTIPLE SPLEENS.

Albrecht showed before the Association of Physicians in Vienna a case of multiple spleens, entirely unique. Scattered over the whole mesentery were more than five hundred spleens from the size of a pin to a walnut. Of the latter size was the one located in the normal place, and this had a normal artery and vein. Every one had a capsule and normal stroma, though very deeply pigmented. Toldt designated the case as without a parallel in literature, or an analogue among all vertebrate animals, and the development of which was difficult of explanation. The spleen is normally developed by an epithelial proliferation of the mesogastrium, in which later the connective tissue of the mesogastrium develops abundantly. It may be conceived that in this case other portions of the peritoneum as well have acquired the capacity of spleen production. Weichselbaum discussed the question of the functional capacity of these multiple spleens. He drew a conclusion in favor of defective function both from the vicarious hyperthorphy of lymph glands and from the unusual pigmentation.—Weiner klinische Rundschau, May 5, 1895.

TO REDUCE INFANT MORTALITY.

"The Sterilized Milk Charity" in New York City will be continued during the summer of 1895. The fourth of the sterilized milk booths for which Mr. Nathan Straus has the permission of the Park Department to erect, is to be situated in City Hall Park and will probably be completed before this item is published. Three others are already in operation, and the fifth will soon be built in Central Park. The price is one cent per glass. One of the newspapers remarks: "Fewer calls upon the doctor is one of the advantages." Although the enterprise was begun in 1894, as late as July, and many of the booths were in operation barely two months, a total of 600,000 glasses of milk were sold. With the earlier start this year and the increased popular knowledge regarding the plan, the total is likely to be doubled. The scheme has heavy expenses aside from the cost of the milk. There is a pay-roll of those engaged solely in this work which foots up $300 a week now, and is likely to be materially increased during the height of the season. To begin with, 22 young women are employed as clerks in the 11 booths and depots. Then eight men and two boys are needed upon the trucks which are constantly busy

carrying the milk from the railway terminals to the central distributing point, and thence to the booths and depots. Tons of ice are consumed daily in keeping the milk cool, and the cost of construction of booths and rent of depots is a considerable item in the expense total.

PILOCARPIN IN AURAL SURGERY.

The pilocarpin treatment of deafness arising from middle ear and labyrinthine disease is one of those methods concerning which there are distinctly two opinions. In our experience of the treatment in selected cases we have never been able to decide whether any improvement which appeared was due to the pilocarpin or to subsidiary treatment, more especially the use of Politzer's air douche. Girmounski has lately summarized the results obtained by him as follows: 1. The injections act only in the early stage of labyrinthine affections, whatever be their origin—syphilitic, traumatic, or secondary—and the earlier in the process the treatment is begun the more effectual it is. 2. In inveterate disorders of the labyrinth and in dry catarrh of the middle ear pilocarpin, whether injected subcutaneously or directly into the tympanic cavity, has no effect. These conclusions bear out our own experience—one may go further and say that any labyrinthine trouble requires immediate treatment if we wish to command anything like success. It stands to reason that so delicate a structure as the internal ear cannot be subjected to abnormal conditions for any period without permanent damage. Taking syphilis, for instance, the small celled infiltration occurring when the labyrinth becomes the object of its attack must be combated at once by appropriate measures, or its injurious effects will quickly become permanent, and result in serious loss of hearing. The motto of the otologist in most diseases of the ear must be "to act promptly and decidedly."

BOOKS AND PAMPHLETS RECEIVED.

THE MEDICAL PROFESSION AND THE STATE—THE ALUMNI ORATION. By Hon. Mariott Brosius, Lancaster, Pa. Alumni banquet of Medico-Chirurgical College.

ASEPTIC PROPHYLAXIS OF ASIATIC CHOLERA: ARSENIZATION. By Reginald Barkley Leach, M. D., member of American Public Health Association, etc., etc.

The subject-matter of this little monograph is confidently commended to the respectful consideration of all investigating medical men, as the hypothesis herein discovered you is consistently dedicated to suffering humanity.

Paris, Tex.

CALOMEL—A STUDY OF ITS PHYSIOLOGIC ACTION AND THERAPY IN GASTRO-INTESTINAL DISORDERS IN ONE HUNDRED AND FORTY-FOUR CASES—IS IT A DIURETIC PER SE? By W. Blair Stewart, A. M., M. D., Atlantic City, N. J., lecturer on therapeutics in the Medico-Chirurgical College, Philadelphia. Reprinted from the journal of the American Medical Association, June 1, 1895.

Miscellany.

ANTIVIVISECTIONIST OBSTRUCTION.

Among the things that tend to harden the hearts of some antivivisectionists the chief is this, that they feel bound to be glad whenever a discovery that was made with the help of experiments on animals fails to bear first fruit in the cure of disease. Let us take the case that by means of inoculations a substance has been isolated which is likely to arrest some malady hitherto beyond our reach altogether. It is tried, and it

is a failure. There is a world's tragedy in such a failure, the confirmation of a thousand death sentences, the ruin of a thousand homes; but the thorough-going antivivsectionist is bound to look pleased, and to say that he knew it would fail, and from the columns of his favorite papers comes a laugh that would sound fiendish were it not so plainly idiotic. But some of them cannot wait to enjoy their laugh, and while a great remedy is still on trial they must needs hunt up all evidence at present against it. Here or there it has failed; this or that hospital has ceased to use it; Drs. A., B. and C. have got on all right without it. "Come, there is enough for us to go upon; let us write to the papers against it." The antitoxin treatment of diphtheria has for most of us passed beyond the stage of trial. It is not only the reports of its success in our own country, not only the splendid news of the results obtained in other countries; but most of us have by this time fought our own battles with its help, and many of us can tell of lives saved by it alone. If it were possible at this moment to gather together all the tales told in our villages of the "new stuff" and all the good words said for it at the end of the day, when the doctor has time to talk, we should hear a roar of applause and thanksgiving. Let us wait a few weeks; at the meeting of the Association in London the full discussion of the whole matter will be heard with the deepest interest, and will be read in every civilized country in the world. But those who oppose every discovery that depends on experiments on animals must wait too. In the twelfth and thirteenth centuries there sometimes rose a cry when typhus fell upon a town, "The Jews have poisoned the wells." To deny offhand that a great discovery has any value at all, to hunt for every hint that here and there it has failed, to rush into print and abuse it to the poor and the ignorant—this is indeed the poisoning of our wells. And to be glad if it does fail is hardly the sign of true love for one's fellow-men.—British Medical Journal.

RESOLUTIONS OF THE ILLINOIS STATE BOARD OF HEALTH.

Whereas, The faculty of the Northwestern University Woman's Medical College adopted a set of resolutions criticising the Illinois State Board of Health for having issued to three non-graduate students of said college the State certificate entitling them to practice medicine, whom they claim were not entitled to receive them, and charging the Board with having adopted a lax policy in numerous other instances, thereby seriously detracting from the usefulness of the Board; and

Whereas, Although the resolutions were "ordered to be placed before the Illinois State Board of Health," they were furnished to the various medical publications of the country simultaneously with their presentation to the Board, and before the Board had opportunity to make any defense.

Whereas, The said college has not made any investigation of the methods or policy of the Board, and could not be in possession of information upon which to found such serious charges, and

Whereas, the secretary of the faculty admitted to the secretary of the Board that the resolutions were adopted without due consideration, and were not so applicable to the present Board, and

Whereas, In the past two years no certificate has been granted to any applicant upon an average rating of less than 80 per cent. in all branches, and the questions and examination papers and a tabulated record of all examinations are preserved, and are matters of record in the office, and

Whereas, It is not in the province of the Board to adopt any policy regarding the admission to its examinations of non-graduates, the law prescribing that "non-graduates shall submit themselves for examinations," and further prescribing that "the examinations shall be of an elemntary and practical character," Therefore, be it

Resolved, That justice demands that the faculty of the Northwestern University Woman's Medical College and all others interested inform them-

selves as to the methods and policy of the Illinois State Board of Health in conducting its examinations with a view to the establishment of the charges made, or of making such withdrawal, alteration or explanation of the charges as the facts may warrant, and further, that the faculty inquire as to whether any individual interest or personal animosity prompted the drafting and circulating of the resolutions.

(Signed) B. M. Griffith, M. D.
Sarah Hackett Stevenson, M. D.

NEW MEDICAL LAW FOR DELAWARE.

The Governor of Delaware, acting under the medical law passed by that State, has appointed two Boards of Examiners, one tc represent each of the chief schools of medicine. The law provides that the Chief Justice and the Chairman of each Board shall constitute a council of medicine empowered to issue licenses to persons that have passed the required examination. The law provides a fine of $500 or not more than one year's imprisonment for persons convicted of practicing without a license. The new Boards of Examiners will meet the first week in July to organize, and the Council of Medicine will then be constituted. Thereafter newcomers must sumbit to examination.

STARCHY FOODS IN INFANCY.

From the fact that no less an authority than Jacobi, of New York, prescribes one part of milk with five parts of barley meal, leads one to conclude that he must think the starch in the meal is digested or he would not prescribe it. Kastens, of Leipsic, has recently been making some extensive experiments by feeding young children with starchy foods, and then analyzing the feces to ascertain what per cent. of the starch passed through the body undigested. The result showed that children and infants have power to digest starchy foods. Schiffer has just concluded a series of experiments showing that children, even when under nine days old, secrete a saliva capable of converting starch into sugar. Further experiments are reported from Berlin which show that traces of ptyaline have been found in the salivary glands of a child only one day old, while not a trace of this could be found in the pancreas even when the children were three weeks old. Theoretically then there is no question but children can digest starchy food. In the light of Dr. Kellogg's investigation, it is only necessary that the saliva be swallowed with the starchy food in order that the starch may be digested. Practically, however, it does not appear to be wise to feed infants starchy food, to the exclusion of other diet.—Nat. Med. Review.

SIMILARITY OF FEATURES IN TRADES.

Dr. Louis Robinson has shown to the world the interesting fact that new-born babies can hang in mid-air from a stick. He now assures us that people who follow the same trade get to look alike. He does not say whether this applies to doctors. —N. Y. Med. Record.

Berlin physicians are supplied with diphtheria antitoxin free of cost, on condition that they return accurate reports of the cases in which it has been used.

ICHTHYOL IN PHTHISIS.

Scarpa, of Turin, gives 20 to 200 drops dissolved in water in the course of a day. He says the good effect of the ichthyol shows itself first in the influence which it has on the cough, expectoration, dyspnoea —afterwards on the general condition. He does not attempt to decide whether the ichthyol acts only by improving nutrition or also by direct action on the lesions, or by neutralizing the toxins produced by micro-organisms. He insists on the advantages which ichthyol presents over guaiacol in the treatment of tuberculosis.

THE PRESENT TREATMENT OF UTERINE DISPLACEMENTS.

Dr. Paul F. Munde, of New York, read a paper with this title at the American Gynecological Society in Baltimore. He said that our views regarding the significance of uterine displacements had undergone a marked change in the last 15 years. A larger experience had taught us that the symptoms of anteflexion in almost all cases were practically nil, and pessaries for anteflexion and anteversion were now rarely used. Personally, he had abandoned the use of intravaginal supporta for the relief of anteflexion, for they had proved ineffectual. Where dysmenorrhoea and sterility were associated with anteflexion good results would often follow dilatation and straightening of the canal, with the introduction of a uterine stem. The pessary devised by Dr. Eugene Gehrung, of St Louis, was the only vaginal instrument that he knew of that would serve a good purpose in the treatment of anteversion with prolapse and cystocele. Experience had taught us that many of the symptoms formerly thought to be due to version or flexion were really due to tubal catarrh and relaxation of the uterine supports.

Retroversions of the first and second degrees rarely gave rise to symptoms, but retroversions of the third degree usually interfered with defecation and caused prolapse of the ovaries. In the treatment of this class of cases he had succeeded well with intravaginal supports, although, as stated in a former paper, he did not cure with pessaries more than about five per cent. of his patients. He had performed Alexander's operation on 77 patients, and had succeeded in following many of them long enough to be assured of the permanency of the result. If the round ligaments were not found it was the fault of the operator. He was as much in favor of the operation as ever, although admitting the difficulties attendant upon its performance. He did not approve of shortening the round ligaments through the abdomen, as recommended by several surgeons, excepting in cases in which the abdomen must be opened for some other and graver condition. He had done the other operation for retrodisplacement—ventral fixation—12 times, and had met with fair success, but one of his patients had subsequently miscarried on account of the fixity of the uterus and, in fact, the operation had never seemed to him to be founded on a correct principle. The plastic operations for prolapsus uteri had not proved successful in his hands. The plan recommended by Dr. Polk and others, of performing Alexander's operation through an incision in the vagina posteriorly, seemed to offer a distinct advance over other methods.

BLUEBOTTLES AS BACILLUS-BEARERS.

That flies carry about infection from place to place, and from person to person, has long been an article of popular belief. Their influence in the spread of ophthalmia has attracted the attention of all who have written upon the social history of Eastern countries. As everyone knows there is some sort of fatuous religious scruple that forbids the Egyptian or Asiatic from brushing away the flies that settle on and about his inflammed eyelids. Hence it has been generally assumed that the flies carried about the specific poison of ophthalmia, and that theory has of late years received scientific indorsement by the wonderful discoveries of bacteriology. At the Royal Society last month some interesting experiments were shown by Mr. T. W. Burgess, illustrating the capability of the common house-fly for transmitting infection. His plan was to expose a fly to momentary contact with a culture of bacillus prodigiosus and then to allow it to escape into a large room. At various subsequent periods the fly was recaptured and made to walk over the sterilized surfaces of a cut potato. These infected slices were then placed in the incubator, and after a time showed flourishing cultivations of the original bacillus. These results, it

is worthy of careful note, were obtained even when the fly had spent several hours in active movement about the room between the time of its original infection and recapture. Mr. Burgess has certainly furnished us with some highly suggestive and interesting scientific data. It is to be hoped that he will extend his researches with pathogenic bacteria so as to find out as far as may be whether the bluebottle may not be the unsuspected bearer to and fro over the face of the earth of many a baleful bacillus.—Medical Press.

CHLORAL HYDRATE IN HEMOPTYSIS.

Dr. J. Palvy has tried chloral hydrate in 15 cases of hemoptysis. Doses of 15 to 25 grains were injected per rectum. They are reported to have produced an effect within one-half to three-quarters of an hour. The chloral hydrate, besides, seemed to be also a valuable prophylactic.—American Medico-Surgical Bulletin.

FRICTIONS OF CREOLIN IN PHTHISIS.

M. Schadewald reports a case in which the infiltration of the upper lobe of the lung has remained stationary and ulcerations of the left upper thyro-arytenoid ligament were cured in consequence of frictions of creolin. The friction was made for 20 minutes every day upon any part of the skin with a tablespoonful of creolin.—Rev. de Laryngologie, etc.

ANTIPYRETICS IN PHTHISIS.

The coal tar products are, in many cases, too depressent. It is better to adopt means for removing the toxic products from the lungs. If some antipyretic is required Niemeyer's pill may be employed, viz.:

R Quin. sulph .....gr. i
Pulv. digital .....gr. ½
Pulv. opii .....gr. 1-6

Ft. pil. Sig.: One pill three times a day.

VOMITING IN PHTHISIS.

R Ext. opii
Cocaine mur.....aa gr. 1-6

Ft. pil. Sig.: To be taken 10 minutes before food.—Med. T. and H. and G.

DYING DECLARATIONS IN PROSECUTIONS FOR CRIMINAL ABORTION.

The Legislature of Pennsylvania recently passed the following bill:

An Act making dying declarations competent in prosecutions for criminal abortions and attempted abortions where the subject shall die in consequence of such unlawful acts.

Section 1. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met, and it is hereby enacted by authority of the same, That the antemortem statements of any woman who shall hereafter die in consequence of any criminal acts producing or intending to produce a miscarriage of such woman as to the causes of her injuries, shall be competent evidence on the trial of any person charged with the commission of such injuries, with like effect and under like limitations as apply to dying declarations in prosecutions for felonious homicide. Provided, however, That before such statement shall be submitted to the jury as evidence the Commonwealth shall, by competent and satisfactory evidence, prove that such woman was of sound mind at the time such antemortem statements were made. And, provided further, That no conviction shall be had upon the uncorroborated declaration of such woman.

Sec. 2. That all acts or parts of acts consistent herewith be and the same are hereby repealed.

WHAT SHALL WE DO WITH THE DOG?

Dr. Theodore R. MacClure, of Lansing, Mich., has been writing a series of articles to the Physician and Surgeon on Rabies. These have been very exhaustive and have covered the

whole field most thoroughly. Reports have been given from each of the Pasteur Institutes, showing the number of persons treated, number of deaths, and other interesting facts in connection with each institute. We call attention to these articles here, however, to bring out some statements concerning the dog. We have become so familiar with this animal that it is hard for us to believe anything against him. But Dr. MacClure says: "There are about three dogs to each family in the United States;" certainly far more than there is any necessity for. Recognizing the fact that probably nine-tenths of all cases of hydrophobia are due to the bite of the dog, we may well ask the question, What shall be done with this animal? While human life is of the first importance, of course, yet the destruction of property must also be considered. Some statistics are furnished by the State of Ohio alone which give a vivid idea of the enormous money loss by dogs. During the past 14 years 404,348 sheep were killed, and 325,585 were injured in that State only, representing a money loss of $2,098,377. Based upon these statistics what startling results would follow were the whole world included. What a loss of human life would also be represented. Certainly these facts are sufficient to make us declare that we should be satisfied with less dogs. However, to counterbalance the immense loss of property we have the income from licenses which swells the local funds of many cities to a considerable amount. It is estimated that in Chicago alone there is turned into the city treasury about $75,000 yearly.

In Bavaria, for the 13 years prior to 1876, the deaths from hydrophobia ranged from 14 to 31 each year. During the past seven years an order has been enforced that all dogs be muzzled. During this period only three deaths have occurred from hydrophobia, although Bavaria has a population of five and one-half millions. Dr. MacClure concludes his series of articles with a number of recommendations, one of which is that all dogs should be licensed, and that, if possible, they should also be muzzled.—Practical Medicine.

ZINC SUBGALLATE, AN ANTISEPTIC ASTRINGENT.

Zinc subgallate is described as an odorless, non-hygroscopic, non-toxic, non-irritant, greenish-gray, neutral powder, insoluble in all ordinary solvents, unaffected by light and containing 44 per cent. of zinc oxide and 56 per cent. of gallic acid. This new remedy is used both internally and externally. Internally it has been recommended in doses of 1-2 to 4 grains (3 to 25 centigrammes) in fermentative disorders of the intestines and in night-sweats. Externally it has been used in eczema, fresh and septic wounds, otorrhea, gonorrhea and hemorrhoids. It is applied pure or diluted with indifferent powders or ointments. As an injection in gonorrhea it is supended in water and mucilage, in the proportion of 1 to 16. —Medical Bulletin.

MORPHINE EXCRETION BY THE SALIVARY GLANDS.

Rosenthal, after investigating the manner in which morphine, when administered hypodermically, leaves the body, reaches the following valuable conclusions: Morphine, even if given in minimal therapeutic doses, is excreted in the saliva in considerable quantities. Its identification is comparatvely easy if the administration have continued for several days. The time in which this excretion takes place cannot be determined by the usual methods; in patients who have received therapeutic doses the proportion of that excreted in the saliva to the amount administered can only be estimated. Morphine undoubtedly accumulates in the body and is excreted gradually. The positive result of tests for the presence of morphine and its quantitative estimation in the gastric contents allows no absolute or reliable estimate either of its presence or the quantity present unless the absence of saliva from the stomach can be confirmed. Dr. Rosenthal points out the value of examination of saliva in cases suggesting morphine intoxication.—Medical Standard.

The Times and Register.

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REPORT OF A CASE OF OSTEO-LIPO-CHONDROMA OF THE UPPER END OF THE HUMERUS—RESECTION OF HUMERUS—EXHIBITION OF PATIENT.

BY THOMAS R. NEILSON, M. D.
Surgeon to the Episcopal Hospital and to St. Christopher's Hospital for Children.

The case which I desire to report to the Academy is that of a young man who suffered from a tumor involving the head and upper end of the shaft of the right humerus. I saw him first in the early part of last February. His history was as follows: J. T. P., 21 years of age, worked on a farm until two years ago, when he learned the trade of electrical construction, in which his work has been light. Family history, good; no history of tumors among relatives. In June, 1893, his attention was called by a fellow-workman, who saw him stripped, to an enlargement of the humerus, the size of a pigeon's egg. One year later it had slowly grown to twice that size. Afterward it grew more rapidly, and in November, 1894, it began to cause inconvenience by its size—limiting the motions of the joint, and giving rise to a sensation of numbness occupying the back of the arms as far down as the elbow; there was also loss of sensation in the fingers, and he noticed some diminution of power in the hand, especially in using the hammer. At no time was there any pain in the growth. There was no history of injury to the shoulder.

Upon examination I found the upper end of the humerus markedly enlarged, the growth being hard and immovable, and having an irregular surface, the larger portion of it projecting inward toward the axilla, and preventing complete adduction of the arms. From the history, the slowness of the growth, the absence of pain, the irregularity of the surface, and the uniform density of the mass, I believed the tumor to be an enchondroma, and felt that resection was to be advised. In this opinion Professor Ashhurst, who kindly examined the patient for me, concurred.

The patient was admitted to the Episcopal Hospital on February 7, 1895. The measurements of the right shoulder as compared with the opposite side were as follows: Around the most prominent part of the head of the bone, just below the acromion (arm adducted), right, 18 inches; left, 15 inches; two inches below the acromion (arm abducted) the circumference of the right shoulder was 14 3-4 inches, and of the left 12 inches.

Operation—On February 13, with the assistance of my colleagues, Drs. Harte and H. C. Deaver, I resected the growth by the deltoid flap operation. Starting my incision at the tip of the coracoid process, I carried it downward along the groove between the deltoid and pectoralis major, and then across the arm to the outer side at the level of the insertion of the deltoid. I next dissected back the skin and superficial fascia about an inch for the whole extent of the incision, and then divided the deltoid transversely about two inches above its insertion. The flap being turned back, the tendon of the long head of the biceps was freed from its groove and held to one side, the capsule of the joint opened, the insertions of the supra- and infra-spinatus and teres minor severed, and the attachments of the sub-scapularis divided. The growth was so large that it was

found impossible to complete disarticulation until the attachments of the coraco-brachialis and of the pectoralis major were also divided. This being accomplished, I sawed through the humerus just above the insertion of the deltoid. After making the section I noticed a suspicious spot of degenerated tissue remaining, and, pushing back the periosteum with the insertion of the deltoid, I cut off another inch of the bone.

Throughout the operation there was no arterial hemorrhage of moment, only a few muscular branches requiring ligature; but the cephalic vein was, unfortunately, slightly torn at the beginning of the operation, while pushing it aside in the groove between the deltoid and the pectoralis major, and again later when delivering the growth. I tied it below the tear, and again some distance further up, and resected the intervening segment—about five inches in length.

This being done, the wound was flushed with normal salt solution, and the deltoid united with several quilted sutures of kangaroo-tendon. A large rubber drainage-tube was inserted, and the wound closed with silk sutures. A bichloride-gauze dressing was applied and the arm bandaged to the side, a large axillary pad supporting it.

The patient did remarkably well and the wound healed kindly.

There was no noteworthy occurrence until the 18th day, when it was found that, at a point about the centre of the wound, just over the anterior axillary fold, the union had broken down, and there was a slight purulent discharge. The cause of this was found to be one of the kangaroo-tendon sutures, which was working its way out. Four days later another of these sutures was discharged from the little sinus, and again in five days a third one. The sinus then healed firmly.

On March 30 the patient was discharged from the hospital. At that time the contraction of the deltoid showed that it had united firmly, in spite of the fact that three of the kangaroo sutures had cut their way out, owing to imperfect sterilization.

The patient, as you will observe, has now very good motion of the arm, and he tells me that he has returned to his former work at electrical construction. The specimen, which I present for your inspection, shows the tumor to be nearly twice the size of the fist, and to have grown largely toward the inner aspect of the bone. A section of the growth was examined by Dr. Joseph McFarland, pathologist to the hospital, who reported the microscopical diagnosis to be osteo-lipo-chondroma

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REMARKS UPON TREPHINING THE CRANIUM.

BY JOHN ASHHURST, JR., M. D.,
Barton Professor of Surgery and Professor of Clinical Surgery in the University of Pennsylvania, Surgeon to the Pennsylvania Hospital, Etc.

I find that I have performed the operation of trephining the skull 41 times, not including those cases in which I have merely opened the frontal sinuses, nor those in which I have removed bone-fragments without using the trephine. Of these 41 cases 20 ended in recovery and 21 in death, showing a mortality of little more than 50 per cent. In many instances I have refrained from interference when other surgeons would have operated, so that my cases have been of an unfavorable type, and the mortality has no doubt been higher than if I had operated more indiscriminately.

The details of these cases are as follows: Twenty-four were primary operations for compound fracture, with 11 recoveries and 13 deaths; two were operations during the intermediate period, both successful; and three were secondary operations, with one recovery and two deaths, both in cases of abscess.

As far as it goes this analysis confirms what has so often been pointed out, that there is not as much urgency in operating upon compound fractures of the skull as there is in compound fractures of the extremities In the latter the sooner the operation is done, if the patient is able to bear it, the better. This has long been the rule in military sur-

gery, when amputation is required, and some years ago I collected extensive statistics from civil practice which showed that the same rule of procedure applied there. But this is not so in compound fractures of the skull, and the proportion of recoveries is larger in delayed cases than when the operation is done immediately, as is well shown by Bluhm's statistics. At the same time, in a bad case, where an operation is evidently necessary, I do not advise delay; but early trephining is not so imperative as in early amputation for compound fractures of the long bones. Trephining for suppuration, occurring as the result of injury, is usually fatal.

In three cases I have operated for syphilitic disease, with two deaths and one recovery. In the latter case, beside evidence of syphilitic brain disease, there were painful nodes on the skull, and I operated by dividing the nodes with a Hey's saw, and then made a single opening with the trephine, so as to relieve the intracranial tension. The patient was much benefited for a time, and left the hospital relieved though not cured. The fatal cases were in patients suffering from syphilis of long standing, with necrosis and intracranial suppuration.

I have been induced to trephine in three cases of epilepsy, all the patients recovering from the operation. One, an epileptic with suicidal tendencies, came under my care at the University Hospital in October, 1886. After the operation the patient was much benefited as long as he remained under observation. In the other two there was no evident improvement, though both did well as regarded the operation. In a case of melancholia, following an old fracture of the skull, trephining gave no relief, and of two cases in which I have operated for convulsions, etc., following old injury, one terminated fatally, while no permanent gain resulted in the other.

I have operated unsuccessfully upon three patients for the cerebral complications resulting from disease of the middle ear. Statistics show that many lives have been saved by trephining under these circumstances, but in my own cases, though the abscesses have been reached and evacuated, the patients have died.

Although I have thus operated in 21 fatal cases by trephining, in only one case did the operation seem to have been responsible for the patient's death. This case was that of a child with depressed fracture over the lateral sinus. On removing the depressed bone profuse hemorrhage occurred, and the patient died in consequence. I had not then learned the futility of attempting to check bleeding from the brain sinuses, except by prompt plugging. I have had four cases since in which the longitudinal sinus was opened, and in two of them the patient recovered. In a third, bleeding was readily controlled by pressure, but ultimately death followed; while in the fourth a clot had formed in the sinus, giving time to apply a lateral suture to the divided vessel. This case was an interesting one; it was that of a boy who had been injured by a nitro-glycerin explosion, a piece of the metal being found lodged in the longitudinal sinus, causing a clot as mentioned.

As regards the locality of the injury, I find that of fractures involving the frontal bone, omitting those simply involving the frontal sinuses, there were five, with four recoveries and one death. These figures do not confirm the general impression that there is special danger in fractures of the frontal bone. Indeed, much more depends upon the amount of injury to the brain than upon the place of the fracture. In one case the indication for trephining was bleeding from the middle meningeal artery, and in that case the patient recovered. He was an athlete, who, while playing football, came into violent collision with another player, sustaining a fissured fracture of the parietal bone. He was stunned at the time, but soon recovered consciousness; in the course of half an hour, however, convulsions came on, followed by coma. He was brought to the hospital, and I applied the trephine, evacuating a considerable quantity of clot; the patient made an uninterrupted recovery.

REPORT OF A CASE OF RUPTURE OF THE URETHRA, ACCOMPANIED BY EXTENSIVE EXTRAVASATION OF URINE. SUCCESSFULLY TREATED BY PERINEAL SECTION AND RETROGRADE CATHETERIZATION.*

BY ORVILLE HORWITZ, B. S., M. D., PHILADELPHIA.

Retrograde catheterization was first performed by Verguin in 1757 by the introduction of a catheter into the urethra through a pre-existent fistula of the bladder. Sedillot, writing upon the subject, expresses a belief that a retrograde catheterization is the proper course to pursue in cases of impassable stricture, or rupture of the urethra, in which the posterior end of the urethra could not be found after making the incision in the perineum.

Retrograde catheterization is not of frequent necessity, but the successful termination of several operations of this kind that we have witnessed, and the experience that we have had with the case that is about to be reported, leads to the inference that the surgeon should not hesitate to resort to this procedure if inordinate difficulty is experienced in finding the distal end of the urethra.

The patient whose case we are about to recount, was brought to the Jefferson Hospital by Dr. Ivin A. Fries. Its history is briefly as follows:

The individual was a laborer, 36 years of age, married. While standing on a ladder he slipped and fell a distance of some ten feet, lighting astride a fence, and violently striking the perineum. He was picked up unconscious, which condition lasted a short time; when on regaining consciousness he found that his perineum, scrotum, and thighs were much swollen and discolored. Any attempt to void his urine was attended with great pain; at the same time he passed a large quantity of blood. An effort was made to pass a catheter without success, and he was advised to enter a hospital for operation. This he refused to do. The following morning the swelling was enormously increased, and had extended to the penis and abdomen. There was complete retention of urine, the bladder reaching to the region of the umbilicus. Frequent attempts were made to draw off the urine without success. Late in the afternoon the patient consented to an operation, and 48 hours after the receipt of the injury he was brought to the hospital. He was in a very perilous condition.

The modification of the Wheelhouse staff, devised by us, which has been fully described elsewhere, was passed as far as the membranous portion of the urethra, and although the urethral canal was very deeply seated, consequent on the perineum being enormously swollen, no difficulty was experienced in opening the passage.

The hemorrhage was very profuse; the bleeding coming from all portions of the wound. It was, however, controlled by means of hot water and the use of a number of hemostatic forceps, which were allowed to remain in position for two days. After the wound had been rendered dry, a persistent search was made for the distal end of the urethra, without success. As the patient was in a very critical condition, and as the operation had already been somewhat prolonged, it was decided that it would be safer to perform retrograde catheterization at once rather than to lose more time looking for the concealed end of the urethra.

Superpubic cystotomy was performed without difficulty; the bladder being distended to its utmost capacity. The first incision through the skin allowed the escape of a large quantity of urine which had extravasated through the ruptured urethra into the perineum. After penetrating the bladder and allowing the urine to escape, an attempt was made to pass a catheter into the vesical orifice of the urethra; the emptying of the viscus had allowed it to sink

*Read before the Academy of Surgery, May 6, 1895.

very deeply in the pelvis, and it was only through the aid of an assistant, who inserted a finger into the rectum and pushed the base of the bladder upward, that the urethral opening could be reached. A silver catheter was then inserted, carried through the prostatic urethra and for a short distance into the membranous portion of the canal, where its onward progress was arrested. On examination of the perineal wound it was found that the distal extremity was turned on itself, and had become wedged into the surrounding crushed tissues. This condition was undoubtedly brought about by the attempts made at catheterization before the operation.

The action of the catheter had forced the end of the canal tightly down into the surrounding structures, much as a ramrod presses down a load of shot into a gun-barrel. The condition of affairs was such as to render it absolutely certain that had not a retrograde catheterization been performed the end of the urethra would not have been discovered.

After opening the membranous portion of the urethra in the manner described, free incisions were made into the penis, scrotum, thighs and the gluteal region, permitting the escape of large quantities of urine which had extravasated into those structures.

When the operation was completed it was found that the bleeding from the perineal wound was not only very free, but that it was impossible to control it without packing the part very firmly with iodoform-gauze. This precluded the insertion of a catheter, so that a large size drainage-tube was placed in the bladder, through the suprapubic opening, and a few stitches inserted.

The shock to the patient was great, but he soon rallied; at the end of two weeks he was again etherized and the continuity of the urethra which had become blocked by the packing was established.

The opening of the urethra could not be found through the perineal wound. The superpubic incision was rapidly dilated, and, recollecting the difficulty experienced in reaching the urethral orifice of the bladder on the previous occasion, a rectal bag was inserted, and then filled with ten ounces of water, which lifted the base of the bladder up to within easy reach of the finger. On passing a silver catheter toward the membranous portion of the urethra through the urethral opening of the bladder, it was discovered that the part had become completely occluded by the deposit of granulation tissue, which accounted for it not having been discovered in the perineal wound. The urethra was liberated by a simple cut of the knife, when the end of the catheter protruded into the incision in the perineum.

The catheter was employed to guide a Teal gorget into the bladder, and after removing the catheter from the bladder a full sized silver instrument was passed from the meatus into the viscus; the gorget served to guide it into place.

The gorget being removed, the catheter was tied in position and allowed to remain in place until both the superpubic and perineal wounds had healed, which required about four weeks. At the end of seven weeks from the date of his admission the patient left the hospital perfectly cured.

A careful analysis of this case would seem to justify the following conclusions:

Where an impossible stricture is present, especially if we are warranted in suspecting the existence of diseased kidneys, or in cases of rupture of the urethra, with indications of perineal section, should there be any difficulty in finding the distal end of the urethra, rather than prolong the operation, it is safer to perform retrograde catheterization with as little delay as practicable.

In cases of retention of urine, where the bladder is distended and superpubic cystotomy becomes necessary, the operation is very simple and requires but a few minutes for its accomplishment, and little time need be lost in resorting to retrograde catheterization.

Should the bladder be emptied or contain but a small quantity of urine the procedure is more difficult and a

longer time is needed. The patient should be placed in the Trendelenburg's position. Great care is to be observed not to injure the peritoneum, which, in this condition, lies directly over the viscus; by taking the pubic bone as a guide and going directly downward the bladder can be easily found and the serous membrane covering it can readily be pushed out of the way by means of the forefinger or the Allis dry dissector.

When the urine has escaped from the bladder and it is desirable to pass a catheter through the vesical orifice of the urethra the operation is facilitated by first distending the rectum by means of the rectal bag.

External perineal urethotomy without a guide, when there is an impassable stricture, or a ruptured urethra, is far from a simple operation; a good, steady, strong light and infinite patience are needed to insure success.

Time is saved and the operation much simplified by using the modified perineal staff of Horwitz.

Much valuable time is often lost by the attempts of the operator to ligate bleeding vessels, which lie in the deeper-seated portions of the wound, imbedded in cicatricial tissue. In a number of the operations of the kind that we have recently performed no effort was made to ligate these deep vessels. Hemostatic forceps were applied and allowed to remain in situ for from 24 to 48 hours. By resorting to this method of procedure no difficulty was experienced and the operation was completed in one-half the time otherwise required. We have frequently allowed from six to eight forceps to remain in a wound at one time.

We cannot too strongly urge upon the profession that the cause of failure to give permanent relief in many cases of external urethrotomy is owing to the fact that many operators allow the catheter to be removed on the fourth or fifth day, so that by the time the individual is ready to leave the institution the urethra, which just after the operation would have tolerated a full-sized instrument, has contracted to such a degree that only a very small bougie can be introduced, inserted with difficulty, and giving rise to a great deal of pain. After leaving the hospital the patient usually neglects to have an instrument regularly passed, and in the course of 12 months the stricture has contracted to such a degree that more frequently than otherwise the operation has to be repeated.

In the last 17 cases upon which we operated a full-sized catheter was inserted, tied in place and allowed to remain in position until the perineal wound was healed, usually requiring a period of from four to six weeks. The instrument must have attached to it a rubber tube, to be carried to a vessel underneath the bedstead, so that the patient and the bedclothes may be kept dry.

The catheter and urethra are to be daily irrigated with a warm solution of boric acid, in the proportion of ten grains of the acid to the ounce of water.

The number of cases that we have successfully treated by this method warrants the conclusion that the suggestion is valuable to the practitioner, and in commending it to the profession we are recommending a means of substituting for a diseased or contracted urethra one of full calibre; for, if the catheter be allowed to remain in position until the wound is closed, not only is the patient dry and comfortable, but a new urethra forms around the instrument, which when removed may be replaced by a full-sized bougie, which can be passed with ease. This the patient should continue to use, at first as frequently as twice a week, later on once a week, and finally once a month; to be continued during his lifetime, that is, if he wishes to avoid future trouble.

At the last annual commencement of Georgetown University, Washington, D. C., the degree of LL. D. was conferred on Dr. Ernest Laplace, professor of Surgery in the Medico-Chirurgical College of Philadelphia.

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LIMITATIONS OF SURGICAL OPERATIONS.

To the most casual observer, disguised as it may, it must occur that within the past 20 years practical surgery has made vast inroads on the domain of medicine.

Anesthetics and antiseptics, combined with the enormous strides of biological research and bacteriological studies, have made possible such sweeping advances along the whole line that in truth to-day many, nay, nearly all of those therapeutical principles so forcibly taught us in the near past must be regarded as positively obsolete and consigned to oblivion.

The above thoughts have been inspired by a masterly address recently delivered by Mr. Pierce Gould and published in our unrivaled contemporary, the London Lancet, entitled "Recent Evolution of Surgery."

While we cannot fully indorse all of the orator's views on this important topic, yet we must confess that nowhere have we met with so learned, logical and eloquent an expose of the subject with which he deals, or any which in its practical bearings approaches its great value.

There is great danger, however, in leaving the impression that there are no limitations to surgical operations in general other than those which are "anatomical" or "physiological."

It is true that we may with reasonable safety anticipate nature's more tedious means of draining a suppurating kidney, by way of the ureter or relieving pleuritic tension from effusion by absorption; but in the one, a nephrectomy except in the hands of a skilled operator and a proper environment, is always a perilous procedure, and at best entails the total sacrifice of what might have been preserved in part at least. And experience has repeatedly proven that pleurotomy, by the aspirator or pre-incision for anything except purulent collections, is attended with danger, and is often followed by prompt relapse of the serous accumulation taking on purulent changes. It is by no means generally decided among surgeons that an open incision into the tissues is either desirable or justifiable in fractures or dislocations except in such an emergency as threatens the vitality of the limb. In female pelvic diseases operative surgery has quite stamped out the older, more conservative medicinal treatment of them. Mechanical appliances have been so generally utilized in the treatment of diseases of the passages, as the nose, throat, rectum, urethra and vagina, that he who would keep apace with the times must of necessity take up surgery. Indeed, to meet the demands wrought by the late evolutions of surgery the number of operating surgeons must needs be greatly augmented, and every practitioner, in order to be fairly equipped to fulfill the requirements of the new regime, must give special attention to the surgical side of the healing art.

But let us not deceive ourselves with a notion that we have attained the millennium and that surgery must

be cultivated at the expense and exclusion of other studies, for without doubt the near future will bring a reaction and the conclusion will be pressed on us that the real acme of the healing art consists in preventive medicine, and addressing such medicaments to the disordered organism as will spare the necessity of mutilation of tissue; then the lesson will be forced on us that the safest and speediest route through which a lesion of a structure or any organ of a pathological origin is through the general system. This will demonstrate that, like every other precious boon, legitimate surgery has its limitations.

THE FOUR YEARS' COURSE.

At the San Francisco meeting of the American Medical Association the representatives of the American Medical Colleges voted to extend the course of study for medical students to four years; and, although all were not prepared to put this scheme into immediate force, nevertheless there was a general unanimity of opinion that in the near future all medical colleges in the United States would in the near future adopt this period as the minimum limit.

After a careful survey of the whole subject we believe that this is a move in the right direction. This is the usual limit required of an apprentice for a trade, and surely we can ask no less for one about to enter the ranks of a learned profession.

However, under the old regime the time is too long. Formerly, in many of our colleges, graduates were turned loose on the public to practice midwifery who never had witnessed a delivery; armed with formidable cases of instruments they went forth, ready to undertake the gravest description of surgical operations, when, perchance, they had never adjusted a fractured limb; with a pad of prescription blanks they were prepared to prescribe potent medicaments, the physical property of which they knew little, the chemical less, and the therapeutical perhaps nothing.

If it be the intention of faculties now to fully equip their graduates with a thorough theoretical and practical knowledge of their profession then indeed four years is none too long. But will they do it? Are they so equipped with ample clinical material, dispensary and hospital; have they all an ample corps of experienced clinical instructors to individually impart a practical knowledge to the advanced student?

If they have then the student can find profitable employment for all his leisure, and enter the world well prepared for the demands which will be made on him.

There is in all large cities an abundance of clinical material which is not properly utilized for teaching purposes, and never will be until the present system of medical education is changed. To remedy this it will be necessary to decentralize medical teaching, at least the clinical part of it, i. e., there should be a larger number of medical schools, each with a small class, in order that the student may come into nearer touch with his teacher and that he may be permitted in a fuller measure the advantages of a personal interest.

London has 13 medical schools with more than as many near hospitals, all being recognized by the council of the British Medical Association. There the student pays for his hospital course, and is free to select whichever he pleases. This plan, it would seem, might be extended to this country with advantage. Another reform imperatively called for is with regard to the payment of examination fees.

Why should a student be compelled to pay for a diploma which carries with it no legal value whatever?

And, after graduation, why should he be obliged to pay another examination fee before he be permitted to practice in his own or another State? If the State Board of Examiners' list is ample then to demand another fee beforehand strikes one as something of extortion, to say the least.

It is hoped now that the Colleges Association, having settled the time limit of study, will now apply themselves to another much-needed reform, viz.: to the abolition of State

examinations altogether and the organization of a national board of examiners with headquarters in Washington. Let this central body divide the whole country into four or six districts for division boards of examiners, and let it be understood that a certificate from any one of them will suffice for any State or territory in the country.

Surgery.

IN CHARGE OF
DR. T. H. MANLEY, New York.

PHYSIOLOGY AND MEDICATION OF THE THYROID.

By Dr. Morin, Revue de la Suisse,Rome.

Kocher, Bruns, Lanz, Nokine, Corubo, Revillod and other investigators have made many contradictory conclusions on the above subject, offering various ingenious hypotheses, without, however, being able to arrive at any definite conclusion on the physiology of the thyroid.

Anatomically the thyroid represents a gland composed of vesicles and secreting epithelia which contain a colloid substance.These vesicles are grouped in lobules, connective-tissue, blood vessels and lymphatics, large and numerous. There are various theories on the function of this body; one of Waldeyer, assigned to it the regularization of the cerebral circulation; the other, the dominant at the present time, assigns to this gland chemical functions in regulating the nutritive processes of economy. The ablation of it is followed by a peculiar cachexia—(myxedema, cachexia strumipriva).

But those symptoms are largely obviated by transplantation, or by an ample injection of the sheep's thyroid. In England, Ord, Harley and Hinton Fagge have observed non-surgical myxedema in cretins with atrophy, or entire absence of the gland. Bourneville and Bricon have noted the general absence of the gland in idiots. In Switzerland, on the contrary, we often note a hypertrophy of the gland in cretins. In Basedow's disease, one of its most prominent symptoms is an augmentation in volume of the thyroid, with a toxic state of the system, supposed by some authors to depend on an excessive secretion of the thyroid secretion. It is true that some believe that goitre is of a nervous origin, though Kocher and others deny this and allege that all the symptoms may and usually depend on an excessive secretion. This they have endeavored to prove by ligating the thyroid arteries, in which cases there always seemed an amelioration of the symptoms.

In my own two cases of Basedow's disease, however, marked improvement has succeeded alimentation with the sheep's thyroid. Threswksy has secured excellent results in some cases of Basedow's by administering the phosphate of soda. In one case, of such vast enlargement of the thyroid as to seriously threaten asphyxia, I advised the removal of the gland. This was refused. Then I employed the animal thyroid, hypodermically, with immediate relief of the symptoms and discontinuation of the growth. The action of the thyroid as a medicament is difficult to explain. On histological examination of a thyroid by Bruns and Langhams, the colloid material in the alveoli had been nearly entirely resorbed. This was after a year's course of treatment with the powdered gland. Notkine isolated a material from a diseased thyroid, which he designated "thyroproteide," which was decidedly toxic when injected into healthy animals.

The latest theory is that there is lodged in the epithelia of the thyroid an element which possesses a neutralizing action on certain lethal elements of the blood, carried there by the circulation for their destruction.

It has been noted that goitre is seldom associated with tuberculosis. In tubercular cases we will note a marked depression in the suprasternal fossa, apparently produced by a resorption of fat and an atrophy of the thyroid. Some have claimed that augmentation of the thyroid confers an immunity against tuberculosis.
(Revue de Therapeutique, Mai, '95.)

WHEN NOT TO TREPHINE FOR BRAIN TUMOR.

Lanpher gives the following rules:

1. It is useless to attempt operation in cases of undoubted brain tumor, when the growths are situated in the corpus callosum and the opticostriate region.

2 It is questionable whether or not operation is advisable in cases in which the usual symptoms of tumor are accompanied by disturbances of speech as the only "localizing" sign; the lesion will probably be found to be near the speech centre, as one would infer, but affecting the pons, medulla and the point of origin of the cranial nerves.

3. Nystagmus, either unilateral or double, permanent or temporary, complicated by paralysis of the motor nerves of one or both eyes, constitutes a barrier to operation as the trouble is unquestionably basal.

4. When nystagmus appears in the history of a case suspected to be tumor, associated with epileptic attacks or hemiplegia, the tumor may be upon the convexity just behind the fissure of Sylvius, but so often that is not the location that operation cannot be advised.—Northwestern Lancet.

RAILWAY ACCIDENTS AND MORTALITY.

From advance sheets of the "Abstract of Statistics of the Railways of the United States" for the year ended June 30, 1894, we learn that, "during the year 1823 railway employes were killed and 23,422 were injured, as compared with 2727 killed and 31,729 injured in 1893. This marked decrease in casualty is in part due to the decrease in the number of men employed, and the decrease in the volume of business handled. The decreased use of automatic appliances on railway equipment also may have rendered railway employment less dangerous and it may be that the grade of efficiency of employes has been raised.

"The number of passengers killed was 324, an increase of 25, and the number injured was 3304, a decrease of 195. Of the total number of fatal casualties to railway employes 251 were due to coupling and uncoupling cars, 439 to falling from trains and engines, 50 to overhead obstructions, 145 to collisions, 108 to derailments, and the balance to various other causes not easily classified. To show the ratio of casualty it may be stated that one employe was killed out of every 428 in service, and one injured out of every 33 employed. The trainmen perform the most dangerous service, one out of every 156 employed having been killed, and one out of every 12 having been injured.

"The ratio of casualty to passengers is in striking contrast to that of railway employes, one passenger having been killed out of each 1,912,618 carried, or for each 44,103,228 miles traveled, and one injured out of each 204,248 carried, or for each 4,709,771 miles traveled. A distribution of accidents to the territorial groups exhibits the diversity in the relative safety of railway employment and of railway travel in the different sections of the country."

PHILADELPHIA ACADEMY OF SURGERY.

Stated meeting, May 6, 1895. The president, Dr. Thomas G. Morton, in the chair.

Dr H. R. Wharton exhibited a case of incised

FRACTURE OF THE PATELLA IN WHICH WIRE WAS EMPLOYED.

Case I. The patient was a man about 30 years of age, who was brought into the Presbyterian Hospital June 9, 1894, with an incised wound of the knee. He said that while running a cleaver was thrown at him, which divided the patella almost transversely and laid open the joint. I saw him a few hours after the accident. I washed out the joint and put one or two heavy silver wire sutres through the fragments of the patella and sutred the capsule with a few stitches of catgut. He was kept five weeks in bed and returned to his work in thirteen weeks. He has regained perfect motion in the joint

and can flex and extend the leg and has no trouble in walking.

ALSO A PARTIAL AMPUTATION OF THE FOOT.

Case II. This case was injured by being run over by an engine. He was brought to the hospital in September, 1892, and I saw him a very short time afterwards. I found that he had a complete crush of the anterior part of one foot. I did a Syme amputation, and have not seen the man since the operation until this evening. He wears an artificial apparatus and walks very well and is employed on the railroad as a switch-tender. He has a very good bearing stump. There is a good elastic pad under the bone. The apparatus is simply a shoe with a brace, with which he gets along very well. He is actively employed and has to run to throw switches. In walking the weight of the body comes directly upon the heel.

ALSO A SIMULTANEOUS AMPUTATION OF THE LEG AND PARTIAL OF FOOT.

Case III. This case is a man who was thrown under a car and both wheels passed over his left foot and crushed the right leg and made a compound fracture of the left thigh, requiring removal of part of the shaft of the bone. I made an amputation of the leg at the upper third and a partial amputation of the other foot. In the foot I first thought I would do a Pirogoff, but decided to leave a portion of the astragalus in place, and to saw through the os calcis and bring its sawn surface in contact with the astragalus. It is seen that he has some motion in the ankle joint. He wears a peg-leg on one side and a short shoe on the other foot (the left). All the force of walking and weight of his body comes on the pad on the sole of his foot.

It seems as if there is an advantage in having some ankle-joint motion. If he should wear a properly made shoe it might be possible for him to have even better motion than he has. He can now walk between five and six miles every day without trouble.

I am glad to show these cases of partial amputation of the foot because there is a tendency at the present day to cry down this form of amputation. Many surgeons think that if part of the foot is destroyed it is better to make an amputation at what is called the point of election in the upper third of the leg. I have done many cases of this kind, but I have not seen a man who came into the hospital with a crush of the foot who would not prefer to have a partial amputation of the foot to an amputation of the leg above. I have seen several cases after Chopart's operation in which the results were very good, and the patients could walk or run without trouble.

THE SEARCH FOR A CANCER PARASITE.

The contribution which Dr. Braithwaite makes to our columns this week adds one more to the list of investigations in the quest for the parasite which is assumed to be at the root of the most formidable class of diseases to which mankind is subject. The labors of histologists have shown that in their structure malignant growths are capable of being classified under certain well-defined groups, according to the type of tissue or organ in which they arise. But histology is silent as to the initial stimulus which gives rise to these aberrant cell masses, as well as to the remarkable potentialities with which they seem to be endowed, so that recurrence in loco and general dissemination by the circulating fluids constitute a peculiar characteristic of malignancy. If in these respects malignant disease bears some resemblance to the character of tubercle, syphilis and like infective disorders, the analogy is purely superficial. For in every member of the class of infective disease the anatomical lesion is limited to the type of inflammatory or granulation tissue, and in none does it partake of the character of the more highly differentiated cells which are to be found in cancers and sarcomas. In the one case the influence of the microbe is confined to exciting changes,

which we term "inflammtaory," and the dissemination of the foci of disease is restricted to the territories in whch the parasite finds a lodgment. If, then, "cancer" (using the term in its widest sense) be also caused by a parasite it must of necessity be an organism which is endowed with quite special powers, for no histologist could declare that there was any real analogy between the processes of aberrant cell-growth in a malignant tumor and those of the small indifferent cells that constitute a tubercle or a gumma. Hence the failure of attempts to extract from malignant tumors by bacteriological methods any organisms of the bacterial class is hardly a matter for surprise. More hopeful of satisfactory result in this search would seem to have been the alleged discovery of cell parasites of protozoic nature; but here, unfortunately, so far the only test that could be applied has been the morphological one, and in spite of the numerous and painstaking researches and the beautiful demonstrations of intra-cellular bodies which have been made it behooves us to be extremely cautious in accepting these bodies as the parasites in question. Similar caution is also needed in regard to the fungi whch Dr. Braithwaite has found, and which apparently belong to the class of hyphomycetes. The spores of such fungi abound in atmospheric dust, the readiness with which they germinate is notorious, and although Dr. Braithwaite assures us that he has found their mycelial threads penetrating the substance of neoplasms (recent and preserved) there is room for skepticism when it is remembered that mould fungi are not infrequently found mingling with tissues on the microscopic slide. Apart from any fallacy of this kind, however, it is well to recall that similar fungi have been found in the body —e. g., in the lungs—and have been introduced into it experimentally, with the result that they have either been quite innocuous or have merely excited some local inflammation. If Dr. Braithwaite's inferences are correct, then the fungi he describes should show some peculiarities, according to the kind of malignant growth in which they occur, since it is not to be supposed that one and the same organism could excite the formation of a uterine myo-fibroma, an epithelioma and a sarcoma. It would be interesting to learn the opinion of a botanist upon the fungus, for if this discovery be confirmed—and the research, as compared with that for the protozoal parasite, is simplicity itself—quite a new light will have been thrown on the role of parasitic fungi.—Lancet.

APPENDICITIS.

1. The first inference from a general consideration of ileo-cecal troubles is that all collections of pus should be evacuated by free incision followed by gauze drainage. 2. Should the appendix be involved in the abscess and already in a necrosed state, it is fair to infer that the canal is closed so that there is no communication with the cecum, and hence excision is not requisite. 3. If, on the contrary, the appendix is found to be enlarged and indurated without perforation, it should be ligated and removed at once. 4. In suspected cases of appendicitis, without the signs of suppuration or the presence of a local swelling or induration, an exploratory operation by a transverse incision above Poupart's ligament, with separation of the muscular fibres, should be resorted to without delay. 5. With a clear diagnosis of appendicitis a longitudinal incision on the outer border of the rght rectus muscle, extending downward over the cecum, is best adapted to reach the appendix. 6. In all cases of recent occurrence in which suppuration has not appeared, but there exists an inflammatory process of the appendix, it should be removed.—Gaston.

The Woman's Medical College of Cincinnati, O., has united itself with the Laura Memorial Medical College. There did not seem to be room enough in Cincinnati for two medical colleges for women.

Medicine.

IN CHARGE OF
DR. E. W. BING, Chester, Pa.

COMPOSITION OF EXPIRED AIR AND ITS EFFECTS UPON ANIMAL LIFE.

1. The results obtained in this research indicate that in air expired by healthy mice, sparrows, rabbits, guinea pigs or men there is no peculiar organic matter which is poisonous to the animals mentioned (excluding man), or which tends to produce in these animals any special form of disease. The injurious effects observed of such air appeared to be due entirely to the diminution of oxygen or the increase of carbonic acid, or to a combination of these two factors. They also make it very improbable that the minute quantity of organic matter contained in the air expired from human lungs has any deleterious influence upon men who inhale it in crowded rooms, and hence it is probably unnecessary to take this factor into account in providing for the ventilation of such rooms.

2. In ordinary quiet respiration no bacteria, epithelial scales, or particles of dead tissue are contained in the expired air. In the act of coughing or sneezing, such organisms or particles may probably be thrown out.

3. The minute quantity of ammonia, or of combined nitrogen or other oxidizable matters found in the condensed moisture of human breath appears to be largely due to products of the decomposition of organic matter, which is constantly going on in the mouth and pharynx. This is shown by the effects of cleansing the mouth and teeth upon the amount of such matters in the condensed moisture of the breath, and also by the differences in this respect between the air exhaled through a tracheal fistula, and that expired in the usual way.

4. The air in an inhabited room, such as the hospital ward in which experiments were made, is contaminated from many sources besides the expired air of the occupants, and the most important of these contaminations are in the form of minute particles or dusts. The experiments on the air of the hospital ward, and with the moisture condensed therefrom, show that the greater part of the ammonia in the air was connected with dust particles which could be removed by a filter. They also showed that in this dust were micro organisms, including some of the bacteria which produce inflammation and suppuration, and it is probable that these were the only really dangerous elements in this air.

5. The experiments in which animals were compelled to breathe air vitiated by the products of either their own respiration or by those of other animals, or were injected with fluid condensed from expired air, gave results contrary to those reported by Hammond, by Brown Sequard and d'Arsonval, and by Merkel; but corresponding to those reported by Dastre and Loye, Russo Gillibert and Alessi, Hofmann Wellenhof, Rauer and other experimenters referred to in the preliminary historical sketch of this report, and make it improbable that there is any peculiar volatile poisonous matter in the air expired by healthy men and animals, other than carbonic acid. It must be borne in mind, however, that the results of such experiments upon animals as are referred to in this report may be applicable only in part to human beings. It does not necessarily follow that a man would not be injured by continuously living in an atmosphere containing two parts per 1000 of carbonic acid and other products of respiration, of cutaneous excretion, and of putrefactive decomposition of organic matters, because it is found that a mouse, a guinea pig, or a rabbit seems to suffer no ill effects from living under such conditions for several days, weeks or months, but it does follow that the evidence which has heretofore been supposed to demonstrate the evil effects of bad ventilation upon human health should be carefully scrutinized.

6. The effects of reduction of oxy-

gen and increase of carbonic acid, to a certain degree, appear to be the same in artifiicial mixtures of these gases as in air in which the change of proportion of these gases has been produced by respiration.

7. The effect of habit, which may enable an animal to live in an atmosphere in which by gradual change the proportion of oxygen has become so low and that of carbonic acid so high that a similar animal brought from fresh air into it dies almost instantly, has been observed before, but we are not aware that a continuance of this immunity produced by habit has been previously noted. The experiments reported in the appendix show that such an immunity may either exist normally or be produced in certain mice, but that these cases are very exceptional, and it is very desirable that a special research should be made to determine, if possible, the conditions upon which such a continuance of immunity depends.

8. An excessively high or low temperature has a decided effect upon the production of asphyxia by diminution of oxygen and increase of carbonic acid. At high temperatures the respiratory centres are affected when evaporation from the skin and mucous surfaces is checked by the air being saturated with moisture; at low temperatures the consumption of oxygen increases, and the demand for it becomes more urgent. So far as the acute effects of excessively foul air at high temperatures are concerned, such, for example, as appeared in the Black Hole of Calcutta, it is probable that they are due to substantially the same causes in man as in animals.

9. The proportion of increase of carbonic acid and of diminution of oxygen, which has been found to exist in badly ventilated churches, schools, theatres or barricks, is not sufficiently great to satisfactorily account for the discomfort which these conditions produce in many persons; and there is no evidence to show that such an amount of change in the normal proportion of these gases has any influence on the increase of disease and death rates which statistical evidence has shown to exist among persons living in crowded and unventilated rooms. The report of the commissioners appointed to inquire into the regulations affecting the sanitary condition of the British army, properly lays great stress upon the fact that in civilians at soldiers' ages in 24 large towns, the death rate per 1000 was 11.9, while in the foot guards it was 29.4, and in the infantry of the line, 17.9; and shows that this difference was mainly due to diseases of the lungs occurring in soldiers in crowded and unventilated barracks. These observations have since been repeatedly confirmed by statistics derived from other armies, from prisons, and from the death rates of persons engaged in different occupations, and in all cases tubercular diseases of the lungs and pneumonia are the diseases which are most prevalent among persons living and working in unventilated rooms, and unless such persons are of the Jewish race.

But consumption and penumonia are caused by specific bacteria, which, for the most part, gain access to the air passages by adhering to particles of dust which are inhaled, and it is probable that the greater liability to these diseases of persons living in crowded and unventilated rooms is, to a large extent, due to the special liability of such rooms to become infected with the germs of these diseases. It is by no means demonstrated as yet that the only deleterious effect which the air of crowded barracks or tenement house rooms, or of foul courts and narrow streets exerts upon the persons who breathe it, is due to the greater number of pathogenic micro-organisms in such localities. It is possible that such impure atmospheres may affect the vitality and the bactericidal powers of the cells and fluids of the upper air passages with which they come in contact, and may thus predispose to infections to potential causes of which are almost everywhere present, and especially in the upper air passages and in the alimentary canal of even the healthiest persons; but of this we have as yet no scientific evidence. It is very desirable that

researches should be made on this point.

10. The discomfort produced by crowded, ill-ventilated rooms in persons not accustomed to them is not due to the excess of carbonic acid, nor to bacteria, nor, in most cases to dusts of any kind. The two great causes of such discomfort, though not the only ones, are excessive temperature and unpleasant odors. Such rooms as those referred to are generally overheated; the bodies of the occupants, and, at night, the usual means of illumination, contributing to this result.

The results of this investigation, taken in conection with the results of other recent researches summarized in this report, indicate that some of the theories upon which modern systems of ventilation are based are either without foundation or doubtful, and that the problem of securing comfort and health in inhabited rooms requires the consideration of the best methods of preventing or disposing of dusts of various kinds, of properly regulating temperature and moisture, and of preventing the entrance of poisonous gases like carbonic oxide, derived from heating and lighting apparatus, rather than upon simply diluting the air to a certain standard of proportion of carbonic acid present. It would be very unwise to conclude, from the facts given in this report, that the standards of air supply for the ventilation of inhabited rooms, which standards are now generally accepted by sanitarians as the result of the work of Pettenkofer, De Chaumont and others, are much too large under any circumstances, or that the differences in health and vigor between those who spend the greater part of their lives in the open air of the country hills and those who live in the city slums do not depend in any way upon the differences between the atmospheres of the two localities, except as regards the number and character of micro-organisms.

The cause of the unpleasant, musty odor which is perceptible to most persons on passing from the outer air into a crowded, unventilated room is unkown. It may in part be due to volatile products of decomposition contained in expired air of persons having decayed teeth, foul mouths, or certain disorders of the digestive apparatus, and is due, in part, to volatile fatty acids produced from the excretions of the skin and from clothing soiled with such excretions. It may produce nausea, and other disagreeable sensations, in especially susceptible persons, but most men soon become accustomed to it and cease to notice it, as they will do with regard to the odor of a smoking car or of a soap factory after they have been for some time in the place. The direct and indirect effects of odors of various kinds upon the comfort, and, perhaps also, upon the health of men, are more considerable than would be indicated by any tests now known for determining the nature and quantity of the matters which give rise to them.

The remarks of Renk upon this point merit consideration.

Cases of fainting in crowded rooms usually occur in women, and are connected with defective respiratory action due to tight lacing or other causes.

Other causes of discomfort in rooms heated by furnaces or by steam are excessive dryness of the air and the presence of small quantities of carbonic oxide, of illuminating gas, and, possibly, of arsenic, derived from the coal used for heating.—Practical Medicine.

A SIMPLE EXPEDIENT FOR THE TREATMENT OF NOCTURNAL ENURESIS.

Stumpf, in the Munchener med. Wochenschrift for June 11, gives an account of a simple and apparently rational expedient which he has successfully adopted in the treatment of nocturnal enuresis, especially in older children. He was led to try it on the basis of the fact that the passage of even a few drops of urine through the sphincter vesicae excites the action of the detrusor to such an extent that the call to urinate becomes almost imperative. It is well known how difficult it is to restrain the act of urination after even a small

amount of urine has passed the sphincter vesicae and entered the urethra. His theory is that during sleep the sphincter of the bladder is apt to become relaxed, so that as the child lies horizontally in bed a little urine passes the sphincter and enters the deep urethra. The irritation of this urine causes at once strong reflex action of the detrusor, and the bladder is at once emptied in a full strong stream. It is a well-known fact that in nocturnal enuresis in children the urine does not leak away gradually, but the bladder is emptied at once, a point which is in support of this theory.

In order to prevent the passage of the urine into the urethra when the sphincter becomes relaxed during sleep a simple expedient is adopted, namely, the elevation of the pelvis, so that an accumulation of urine of ordinary amount in the bladder will gravitate back and distend the fundus, and not press against and tend to pass the sphincter. The elevation is secured by allowing the child only a single, small, flat pillow under the head, and placing one or two ordinary pillows under the thighs so that they lie at an angle of 130 to 150 degrees with the horizontal spine.

This simple expedient was entirely successful in curing two inveterate cases, one of a boy 9 years, and one of a girl 15 years old. It was then tried in 12 cases, and was uniformly successful. It was usually necessary to continue the treatment for three weeks, after which time the children were able to return to their former sleeping position without relapsing.

The writer has found it unnecessary to have recourse to the time-honored measures of limiting the amount of liquids, frequent waking up during the night, etc. The chief difficulty about the treatment is to see that the children maintain the position throughout the night. Small children particularly are apt to wriggle and toss about and have to be watched, put back in position, etc. The method is therefore especially adapted to older children, in whom the position can be more easily maintained.

This method is certainly so simple and apparently so reasonable as to merit extended trial, especially as the time-honored methods of treating this pernicious habit are in so many cases unsuccessful.

It will be rather interesting if the elevation of the pelvis, which Trendelenburg introduced into abdominal surgery, and which has so extended and facilitated work in that field, should also prove of service in preventing children from wetting the bed.—Boston Med. and Surg. Journ.

HEMATURIA OF GOUT.

Mabboux says: "An attack of renal gout consists anatomically in hyperemia, but there is not of necessity hematuria. The appearance of albumin in the urine or its sudden increase, whether or not it is coincident with articular pain, but accompaned with tenderness in the loins, is most frequently due to an attack of renal gout. These attacks are to be distinguished from renal colic due to calculi. Some attacks of hematuria occur without pain or pre-existing hematuria. Renal gout occurs in females quite as frequently as in males.

"Gouty hematuria is practically always renal in origin, as attacks of cystic gout resemble those of an ordinary cystitis, and a urethral gout possibly does not exist. In neither of the last instances are the blood and urine intimately mixed. Gouty renal colic may occur suddenly or after some days of lumbar pain. It often is the first expression of the diathesis in individuals of full habit without any genito-urinary disease; it is frequently accompanied by a chill; it is not influenced by walking or jolting; the pain is always bilateral, and the passage of the bloody urine is not painful. Its duration is variable; it may last from a few hours to several days. Sometimes there are a series of attacks lasting over several days. The urine frequently contains considerable renal epithelium in addition to the blood, and contains albumin in excess of the

amount of blood, which continues after the blood has disappeared. The pain is not frequently acute nor sharp, as it is in stone."—University Medical Magazine.

TREATMENT OF PROLAPSUS OF THE RECTUM BY GALVANISM.

Dr. R. B. Mitchell reports three cases of this troublesome affection which were relieved by the use of the continuous current. The intestine was first replaced within the sphincter (in one case this could only be accomplished by putting the patient under the influence of chloroform); one pole (he does not state which) was then introduced within the sphincter and the other over the sacral region and the current passed for five minutes. Maximum strength of the current used is not given. One to two treatments a week were given. The results were very slowly obtained The first case required four months of treatment before the bowel ceased to prolapse, but has since remained free from the trouble. In the second case—that of a woman with chronic mania, the protrusion being the size of a cricket-ball and intensely congested and bleeding—it required six months to bring about a like result. The third case was that of a man of 36 years, who had general paralysis with loss of strength and of co-ordination in the lower extremities and obstructed constipation. This patient required eight months of treatment. The great objection to the treatment is the length of time required, but it is possible that more frequent treatments would accomplish the result in a shorter time. He considers the treatment most suitable to cases in young children and the insane, in whom it would be difficult to keep the dressing in place after an operation.—Virginia Medical Monthly.

A CASE OF FETAL ASCITES.

Dr. F. B. Grimsdale writes: "Cases of this character are rare, and they are pathologically obscure. No adequate fetal lesion has been found to account for them. It has been necessary to call in some complicated pathological process, partly due to the mother and partly to the fetus, in order to explain the condition. In the present case the mother had suffered from albuminuria and general anasarca. After the delivery of the head with forceps it was found impossible to deliver the body. Examination showed a greatly distended abdomen. Delivery was effected after puncture of the abdomen and the liberation of a large amount of fluid. The whole body of the child was edematous and pitted on pressure. The surface of the trunk and limbs was covered with petechie. The abdominal wall was found to be one inch in thickness, due chiefly to watery adipose tissue. The lungs were collapsed, pale, and pink. There was no fluid in the pleura or pericardium. The liver and kidneys were, to the naked eye, normal. The heart and other organs were normal also. A definite lesion of the liver and kidneys was found upon microscopical examination, but its character is not stated. The author believes that various lesions may cause the condition. In this case he believes that the disease was primarily fetal, to which the maternal nephritis was secondary.—Archives of Pediatrics.

Miscellany.

REMEDY FOR INSECT STINGS.

A paint for the stings of insects, in which ammonia is kept in close and prolonged contact with the affected part, is described as follows:

Water of ammonia	1 drachm
Collodion	20 minims
Salicylic acid	2 grains

A few drops to be applied to each bite or sting.—Druggists' Circular.

TO EASE THE PAIN OF CORNS.

It is said that bathing the feet well in warm water and binding moist sodium bicarbonate over the corn at night will deprive it of its soreness before morning.—Lancet-Clinic.

RULES AS TO TIME OF RUPTURING THE AMNIOTIC SAC IN LABOR.

1. In multipara, rupture when os is fully dilated.

2. In primipara, delay until the small parts are also dilated.

3. In cases of face and breech presentation, delay in rupturing the sac is best.

4. Where the pelvis is small, and the fetus large, delay rupturing.

5. In premature labor, with dead fetus, rupture early.

6. Rupture the sac early when the membranes are unusually thick, tough and unyielding.

7. When speedy delivery is demanded, rupture early and dilate with the fingers.

8. Rupture the sac when an excessive amount of amniotic fluid retards labor.

9. When version is necessary, and can be accomplished by bimanual manipulation, perform this operation before rupturing.

10. Remember that a dry labor is always to be deprecated, hence do not rupture at all, unless for good reasons, and the case demands it.—Practitioner.

THE MEDICO LEGAL POINTS IN REGARD TO INFANTICIDE.

1. It is possible for woman to be unconsciously delivered, but not likely that she should go through the full term without being conscious of her pregnancy.

2. If the child was suddenly and unexpectedly born, and dropped accidentally on the floor or into a water closet vault, the cord would be found torn and broken off and untied, and not cut and tied in the ordinary manner.

3. In order that a child shall be live born within the meaning of the law, it must show some sign of life after being completely separated from the mother.

4. If a woman prepare no clothing for her child, and the child be found dead shortly after birth, this would be considered very strong evidence that the woman intended to destroy it.

5. It is possible that a child may be born living, yet so badly deformed as to render the prolongation of life, after the separation of the cord, impossible.

6. If the child has food partly digested in the stomach and intestines and the meconium all passed away, the child has lived at least twenty-four hours and has been fed.

7. If the septum ovalae of the heart is found closed, making a four-cavity heart, the child has lived as much as four days.

8. If the navel cord has withered and come away, and the navel healed completely, the child has lived as long as a week.

9. It is a fact worthy of remembrance that a child will stand a great amount of exposure, and that they have been found living for days after neglect under the most terrible circumstances.—Medical Summary.

VOMITING OF PREGNANCY.

A physician reports that he has not failed for many years to quickly check every case of vomiting of pregnancy, neuralgic toothache and pruritus pudendi of the pregnant state, simply by a single vesication over the fourth and fifth dorsal vertebrae.

Whenever sodium salicylate cannot be given in articular rheumatism, because of grave toxic symptoms, use hypodermic injections of pilocarpine, one-sixth grain.

ABORTIVE TREATMENT OF ERYSIPELAS.

Dr. W. H. Dewitt, Cincinnati, in the Lancet-Clinic, says: "I don't know that I am strictly warranted in using this term, for I doubt whether there is, or can be, such a thing as aborting erysipelas, and yet I do believe the treatment I have adopted for the past twelve months comes as near to it as possible. I have treated in all eight cases, the average duration being of a little less than four days. Five of the eight cases were facial, the remaining three of the lower extremities. The following formula was used in each individual case:

R—Ichthyol ..... dr. iiss
Collodion flex .....oz. iss—M.

This was directed to be applied

every three hours, always commencing the application about one inch beyond the line of demarcation between the healthy and inflamed skin. I believe this to be of the greatest importance. By adopting this method you will in nearly every case prevent the spread of the disease. The strength of the solution can be varied if thought best, but after several trials I have found the one suggested the more reliable. A great deal will also depend on the quality of the collodion. If good it will not crack and peel off in a few hours, but, on the contrary, will adhere firmly for some time, affording a perfect protection to the surface. In case it becomes loose and partially detached from the surface it should at once be removed and followed by a fresh application. At no time should the surface be left exposed longer than possible.

THE PRINCIPLES OF FEEDING.

BY DR. ERNEST FREUND.

According to Voit, the economy of a healthy man weighing about 150 pounds requires for its maintenance albumenoid substances, fats, and carbohydrates in about the following quantities:

Albuminoids	118 grams
Fat	56 grams
Carbohydrates	500 grams

In order to introduce a sufficient quantity of these substances into the organism for its support the breakfast should consist of: Coffee, 7 ounces, with sugar and roll; dinner of soup with 5 ounces of meat, 5 ounces of potatoes, 2 rolls, also 3 ounces of flour, and 5 drams of fat; an afternoon meal, the same as breakfast; evening meal, 3 1-2 ounces of meat, 2 ounces of rice and bread.

It is by no means necessary to take meat, as the nutritious constituents therein are represented in milk, cheese, leguminous substances and bread. It is impossible, however, to introduce a sufficient amount of albuminous substances by employing vegetables alone as articles of food. Mineral substances are also necessary, and the food will have to be prepared so that the necessary amount of inorganic substances is supplied the system.

Another important point is the absorption of the nutritive elements of the food-stuffs introduced. If in spite of a good diet the individual does not become fat, the causes are frequently to be found in changes in the intestines resulting in a smaller amount of absorption. In pathological processes, such as tuberculosis, the resorption is, of course, entirely different than in the normal state. The animal cell will try to reconstruct itself as long as it is possible to do so with a correct diet, and so long it will withstand deleterious influences from without.—Am. Med.-Surg. Bul.

DOCTORS' BILLS.

The Chicago Times publishes an account of an interview with a member of a firm in that city whose business consists entirely in the collection of doctors' bills. He was asked if the majority of patients paid their accounts, and said that they did not. From this it would be inferred that in Chicago over one-half of the patients failed to pay their doctors' fees—a statement that is extraordinary and improbable. We believe that in most American cities from 70 to 80 per cent. of the fees charged are paid and collected, and probably a larger percentage would be obtained if doctors rendered better service or managed the business side of their profession in a more rational manner.—N. Y. Med. Record.

THE NEW HEALTH COMMISSIONER FOR NEW YORK.

Dr. George B. Fowler has been appointed Health Commissioner of New York City in place of Dr. Cyrus Edson, resigned. Dr. Fowler is a native of Alabama, but came to this city during the war, and graduated from the College of Physicians and Surgeons in 1871. Dr. Fowler is a well-known and very popular member of the profession of this city, and his appointment will give pleasure to his very large circle of riends. Dr.

Edson's career as a member of the City Board of Health was most creditable to him, and he retires with a reputation of the highest kind as a sanitary and executive officer.

A REMEDY FOR BURNS.

Our exchanges often contain articles and items recommending different preparations for burns, each one generally closing with the old standby of lime water and oil, but the editor of the Charlotte Medical Journal asks, Why not use a remedy within the reach of everyone, and found on almost every pantry shelf? The editor says that at the very first possible moment grasp a handful of lard, such as is used for cooking purposes, and smear it over the burned surface. Then make a paste of flour and lard, as soft as can be handled, spread it about half an inch thick upon a cloth, and cover the injured parts. Let this paste remain until it begins to crumble, which can be ascertained by raising a corner of the cloth. Then make a fresh application, using great care in taking off the old plaster, that the surface of the skin be not broken.—Practical Medicine.

COCAINE INJECTIONS FOR ENLARGED PROSTATE.

For many years the difficulty of enlarged prostate has been to me one of considerable importance. Castration is probably the least desirable operation in operative surgery—not because of the difficulties or dangers present in the removal of the testicles, but because of the destruction of the virility of the individual concerned. While in search for a remedy short of absolute castration I devised a method that has so far succeeded in two cases; this is, to inject cocaine directly into the testicle twice per week for about two months. There is considerable absorption, and spermatozoa cease to be produced in about six weeks. The patient gets immediate relief from the distressing symptoms of prostatitis and enlargement; the gland gradually shrinks to its normal size, and the finale of the case is recovery, with the power of copulation but absolute cessation of the production of spermatozoa. Is not this better than castration?—Doctor S. E. McCully, in Medical Record.

CHEWING GUM IS NOT A FOOD.

We are greatly disappointed at the decison of a recent judge who declares that chewing gum is not an article of food, coming under the food and drug act. We had always supposed that gum was a food, and that great nourishment could be derived from its use. We can think of no other reason why old men and "middle-aged" women should ever use it, unless they have been suffering under the same delusion as ourselves. Young girls might use it because they must keep their jaws going, and this is an innocent way whereby they can work off this excess of masticatory enthusiasm. Now that we know we are not deriving genuine nourishment from Beeman's favorite preparation of pepsin, we shall, of course, throw no more money in the penny-slot machines!—Practical Medicine.

THE MICROBE FIEND.

O these doctors! Yes, these doctors
  Make me weary day by day
With their everlasting warnings
  That they swear we must obey.
Ah, microbia! microbia!
  Thou art a thing of fame;
But what crimes are now committed
  In thy inoffensive name!

With his microscope the health fiend,
  With most scientific care,
Goes a-gunning for bacteria
  And finds them everywhere.
Yes, he bags them in the horse car,
  In the foyer and the saloon;
The free lunches he calls "deadly
  As a corking day in June."

In the corner soda fountain,
  In the keg of foamy beer,
On the very nimble nickels
  That buy thirsty souls a cheer;
In our hats and shoes and pockets
  He finds snakes and bugs and things
That, when magnified, are monsters
  With ten thousand legs and wings.

O these doctors! Yes, these doctors!
  Is it then a fact most true
That, with all these warnings, men live
  Longer than they used to do?
Nay! Our ancestors lived longer
  In their ignorance sublime,
While these howling health fiends scare us
  Half to death before our time.

The Times and Register.

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Original.

TRIONAL IN NESURASTHENIC INSOMNIA.

BY DR. CLAUS,

First Assistant Physician to the Guislain Hospital and to the Female Insane Asylum in Ghent.

Observations with regard to the hypnotic effects of trional multiply from day to day. The contributions of Baumann, Kest, Schaefer, Horvath, Randa, Koppers, Collatz, Mahon, Mattison, Beyer and others all express themselves favorably as to the efficiency of this remedy. We have, on our part, tried trional as a hypnotic in children, and consider ourselves justified in the conclusion, that in the nervous forms of insomnia it is a reliable hypnotic free from injurious effects.

These are not isolated observations; trional is recognized in our newest classical works.

Oppenheim speaks as follows of the treatment of sleeplessness in neurasthenics in his text book on nervous diseases: "If medicinal treatment is called for the bromine preparation, as for instance bromine water, should be first tried. As efficient hynotics, paraldehyde in doses of 3.0 to 6.0 gm., sulfonal, 1.0 to 3.0 gm, and especially trional, deserve mention. Thus far I have derived only good results from the latter. Amylene hydrate is also a serviceable hypnotic; the others are less entitled to praise. Morphine and chloral can usually be dispensed with."

Among hypnotics, therefore, the most favorable results are ascribed to trional by Oppenheim, the experienced Berlin neurologist.

Wilhelm says: "I would mention among the multitude of remedies employed in recent times in the neurological clinics two other drugs, trional and tetronal, both of which have an action similar to that of sulfonal. Of these trional is given in single doses of 2.0 gm., finely pulverized, in 200.0 gm. fluid at night time." According to Wilhelm sulfonal belongs to the least harmful hypnotics, which are prescribed for neurasthenic sleeplessness.

Trional has the advantage over sulfonal that is devoid of disagreeable after-effects.

George Guinon also incidentally recommends trional and sulfonal.

Zicheu, in his excellent book on "Psychiatrics" (1894), remarked as follows: "For neurasthenic insomnia we should employ, when the wet pack and prolonged baths prove ineffective, transverse galvanization of the head (1-2 m. a.) and effleurage to the forehead and occipital region. Only in case of necessity should drugs be resorted to. The most serviceable among these are sulfonal and trional."

It seems superfluous to us to cite other authors who have spoken favorably on the use of trional in the sleeplessness of neurasthenics. Our observations coincide with these favorable results, and like the above we regard trional as the best and least injurious hypnotic for neurasthenia.

We have employed it only in cases of real insomnia. It must not be forgotten that some neurasthenics exaggerate their ailments. If we would believe his statements he has heard the clock strike every hour of the

night, and yet, as a matter of fact, his room-mate has heard him snore vigorously at various times.

This tendency to exaggeration is peculiar to most of these patients, and characteristic of certain forms of this affection; and if this be not taken into consideration the results obtained might appear less favorable than we are warranted in regarding them.

We will not describe in detail the 30 cases observed by us. We will only select the typical cases—those which permit us to formulate certain rules for the application of this remedy, or which illustrate some points to which attention has not yet been called by authors.

In the majority of cases the patient falls asleep as soon as he is in bed, but at the end of two or three hours awakes and can obtain no further sleep for that night. Others remain awake for hours, often until morning.

How is trional to be employed in the former class of patients? Shall it be adminstered before the patient retires, or is it better to wait until the patient awakes? All the observations which we have made convince us that trional should be given at bedtime and not when the patient wakes up. In four typical cases we employed both methods, and found that when given on awaking trional produces a heavy sleep disturbed by dreams, while if administered at the moment the patient retires it always gives rise to a gentle and refreshing sleep.

In one case, that of a woman who had become neurasthenic from prolonged grief, we tried both methods alternately from day to day for a period of eight days. At the end of this time she refused to continue trional in this manner, and we then administered it every other day, and were assured by her that on the days she took no trional she enjoyed better sleep than when she took the drug on awaking.

After this experience we postively concluded that trional must be administered before the patient retires.

In cases in which the patient does not fall asleep and lies awake for a number of weary hours no especial indication for the mode of application can be given. As a general rule it may be said that, even if not much excitement exists, trional must be ordered in larger doses than in patients of the first group.

An officer suffering from complete insomnia, with resulting marked irritability, has taken for three weeks 3.0 gm. trional, which produced sleep of five to six hours' duration. Since then his irritability has greatly diminished and now 2.0 gm. suffices to afford satisfactory sleep. This case has shown us the injurious influence which insomnia exerts upon the various symptoms of neurasthenia. The cerebral irritability is not only increased, but the various disturbances are enhanced, or even may be brought into existence under this deleterious influence. The same holds true of certain dyspeptic disturbances, which some erroneously consider as essential disorders of neurasthenia.

Under the use of trional the officer just referred to, who had suffered for a long time from complete anorexia, gradually regained his appetite, and at the present time, after two months' treatment, his appetite and digestion are almost normal.

This favorable influence of trional upon the digestion of restless, anxious and excited persons is a matter of regular observation—a fact which we have often verified. In two other cases of typical neurasthenia we have noted an improvement in the gastro-intestinal functions under influence of the drug.

These observations demonstrate, as Bouveret has remarked, that in many cases the neurasthenic symptoms are not subordinate to the disturbances of the digestive organs. Not infrequently we see neurasthenic dyspepsia appear suddenly at the same time with or after the occurrence of the cardinal symptoms of neurasthenia; the headaches, sleeplessness and cerebral depression. Furthermore, the dyspeptic symptoms sometimes follow in a remarkable manner the change in the cerebral symptoms. In the three cases observed by us the

dyspepsia was directly dependent upon the insomnia. The favorable effect of trional upon the sleeplessness, and further upon the dyspepsia sufficiently testify to this.

How can facts of this kind—and they are not infrequent—be brought into correlation with the hypothesis of the subordination of the neurasthenic symptoms to the digestive disturbances? The dyspepsia is secondary; it is the consequence, not the cause of the neurosis. This is the view of Charcot. "In neurasthenics," says he, "even when habitual gastrectasis has developed, the latter is subordinate to the cardinal nervous symptoms."

In this way it is easy to explain why trional, if employed in obstinate sleeplessness, may exert a favorable effect not only upon the dyspeptic disturbances, but also upon the other disagreeable symptoms of neurasthenia. We have seen the nocturnal pollutions disappear after its administration. These pollutions had an extremely unfavorable influence upon the patient, and their disappearance contributed greatly to elevate his moral nature, and to hasten recovery. It seems to us superfluous to enter into further details with respect to the employment of trional in the insomnia of neurasthenics. We have confined ourselves to calling attention to a few points which have not been sufficiently emphasized by other observers.

Trional has always given us favorable results (thirty cases). In one case a servant maid, who in consequence of prolonged waking at night and psychical excitement had become neurasthenic, trional in 1.0 gm. doses during six weeks had an excellent effect.

For reasons which we were unable to ascertain and despite the administration of larger doses it then suddenly lost its effect. We found it necessary to resort to other hypnotics, which failed to afford the expected result. The patient has since then left us.

The dose varies according to the form of insomnia and according to the age. On the average 1.5 gm. are sufficient.

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A CASE OF EXCISION OF THE ELBOW-JOINT FOR FRACTURE OF CONDYLE OF HUMERUS, WITH POSTERIOR DISLOCATION OF THE BONES OF THE FOREARM.

BY H. R. WHARTON, M. D.

Mrs. W., aged thirty-five years, received a fall April 29, 1894, sustaining an injury of the right elbow, which was diagnosed as a dislocation with fracture of the condyles of the humerus. She was sent to me in October, 1894, and upon examination of the arm I found marked deformity in the region of the internal condyle of the humerus and a posterior dislocation of both bones of the forearm, the arm being rigidly fixed at a right angle, and the patient complained of constant pain in the elbow.

I advised excision of the elbow-joint as the operation most likely to give her a useful arm.

On November 8, 1894, I excised the right elbow-joint, finding that there had been a fracture involving

the internal condyle of the humerus, and that the ulna and radius were dislocated backward, a large amount of callus had been thrown out, which made the operation a difficult and tedious one.

The patient did well after the operation; the wound healed promptly, and at the end of four weeks the patient had a fair range of motion in the new joint. You will notice on examining the arm that the patient has remarkably free flexion and extension of the arm, also good supination and pronation, and as the result of operation has attained a very useful arm.

LOOSE CARTILAGE IN KNEE-JOINT.

BY H. R. WHARTON, M. D.

J. W., aged 24 years, was sent to me with the history, that for some years he had suffered from a movable body in the left knee-joint which at times interfered with the motion of the joint.

He stated that four years ago he had wrenched his left knee by stepping upon a stone which rolled under his foot, and that after the accident the knee was bent, and could not be straightened. This condition existed for four months; at the end of this time he regained use of the knee-joint, but noticed the presence of a body which moved about in motions of the joint, and at times entirely disappeared. At times its presence caused him more or less disability.

I had no difficulty in locating the position of the body, and after finding it cut down upon it and removed it. I show the body removed, which is quite a large-sized one.

This case is of interest in that it points to the possible traumatic origin of some cases of loose cartilages in the joints. They are usually supposed to originate from the villous fringes of the sigmoid membrane; but some authorities, such as Paget and Teale, have contended that they might originate from detached portions of the articular cartilage of the joints.

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HOW ABOUT THE LITTLE FISHES?

The late exchanges from across the water inform us that in England the whole profession is in a red-hot ferment on the hospital and dispensary question. The latest echo from our transatlantic cousins comes to us in the form of a protest, presented by London practitioners against opening pay wards in the Great Northern Hospital. Practitioners in that hospital district, learning of the new scheme about to go into effect, called an indignation meeting and sent a protest to the Board of Managers against admitting to the wards of a public charity those who were able to pay for nursing and attendance, as it was in direct contravention of the spirit and purpose of such institutions, which are intended only for the

poor and destitute. But as we might expect, the managers contemptuously ignored the respectful appeal of the general practitioners, and, in defiance of it, invited all to enter who had the sovereign to pay.

In the meantime, the resources of St. Thomas' Hospital have become reduced in spite of the prostitution of the endowments of that institution to support pay wards, and, notwithstanding the piteous appeal of the Duke of Connaught for contributions, money has not been forthcoming.

In America those collossal infirmaries and smaller fry which appeal to the public for support are working incalculable harm to legitimate practice. The wail of the colleges that clinical material must be had is a deception. As a matter of fact there is an excess of material for teaching among the destitute poor and needy.

Some of our leading medical journals have been finally moved to open sieges on the medical colleges and hospitals. The "Medical News" attacks hospital managers and college faculties in a merciless manner, and the "Journal of the American Medical Association" falls into line, laying the lash on unsparingly, particularly, and unjustly we think, in the case of post-graduate schools.

In New York city, at the last meeting of the County Medical Association, the management of the principal public, college and private hospitals and dispensaries was fiercely denounced. They were charged with deceiving the public, abusing a trust, demoralizing and pauperizing the medical profession; and a committee was organized, with Dr. Douglas H. Stewart as chairman, to immediately institute a searching investigation into the whole subject, and if ground for action was later found necessary, to rally the whole force of general practitioners to meet and crush the evil which threatens their near extinction, or will make it impossible for one to mantain a respectable existence in his profession. We understand that the committee will force this matter on the notice of the city government, and in the winter seek legislation at the capitol.

In all our larger cities, and indeed in many of our smaller villages, sanitariums, women's hospitals and various special hospitals, with free dispensaries without number, are cropping up. The methods of some of these unquestionably are, to say the least, rather "shady." In one's morning newspaper, folded up, is a circular notice of the "best free treatment by eminent physicians;" handbills are scattered through the tenements, and frequent newspaper notices of them appear. Now, the serious question arises, What can the profession do, if anything, to remedy the present hospital and dispensary evil? For it would seem that unless some drastic and far-reaching remedy is applied, in spite of our vaunted State laws and examinations, in the very near future we will witness in this country a State charlatanry and quackery contrasted with which the worst ever witnessed would be but a mere shadow.

The council of the British Medical Association has recently declared itself quite impotent to deal with the evil. Any one, it seems, is free to give his time for nothing if he pleases. Ambition to be a consultant or a "professor" it seems is no crime, and of this latter commodity there is no special dearth, for we hear of one of our medical colleges with a staff of fourteen professors, with great pomp and gusto, out of a large class of seven students graduated two.

It had been lately suggested that a way to meet the free dispensary competition would be to have all large cities districted and provided for means of attending all needy applicants. This, it was thought, would cut off some of the supplies of the larger concerns and provide something for practitioners to do, to utilize their excessive leisure.

However, much as we may dislike to admit it, the fact and the truth are that if the principle of free and indiscriminate treatment is right for mammoth institutions, with a large number of physicians attached to them, who are there for what their labors will bring them, it equally applies to the single practitioner as to a few to indulge the luxury and pose as philanthropists.

BONE TUBERCULOSIS.

Mr Konig has lately examined 300 anatomical specimens of tuberculosis in bone, which had been removed by resection and amputation.

He came to the following conclusion, viz.: that in the knee the infection commenced in sero-fibrinous structures, the synovial-membrane. The primary point of selection in all cases involving the joints varies.

By a spread of inflammatory processes there is a fibroplastic transformation of the vascular areolar tissue. With this degeneration the vascular supply is diminished or entirely cut off from the cartilages when they break down and degenerate.

During the space of 18 years Konig had treated 727 cases of bone tuberculosis at his clinic. All these involved the knee. He was able to follow 615 cases. Of these 410 were yet living, about two-thirds. They were treated by various plans; by injection of iodoform, by orthopaedics, by resection, gattago, etc. Of 193 cases treated conservatively 63 recovered; 40 with a movable articulation. Intra-articular injections of phenic acid in 63 cases gave 33 cures. This substance he found preferable to iodoform, which he injected in 40 cases with only 13 cures. In 150 cases he had resected 106 recovered completely. In all those cases of resection there was shortening of from 2 to 20 centimetres. In all his ostheotomies of the knee there was mobility and non-union in only one.—Annales D'Orthopedie et De Chirurgie Practiques, March, 1895.

* * *

Crocus (Lancet, No. 3691, p. 1285) reports a highly interesting case of acute suppurative central ostitis of head of femur in a child in which he was able to cut short a severe attack of coxalgia by an early incision on to the great trochauter, drilling into opening and draining a pus cavity. The augmentation in volume of the head of the bone was so great that it was at first supposed there was a case of para-epiphysitis. The pus cavity was lined by granulations and extended well inward.

The author dwelt at length on the importance of making an accurate diagnosis in all this class of cases, particularly insisting on the differential features between rheumatism and tuberculosis. The diagnosis is only difficult when there is an implication of the superior segment of the femoral diapysis. Here the bone on its inner surface is so deeply covered by muscles that it is not readily examined.

When the surgeon is once assured that septic osteomyelitis is developed he must lose no time with temporizing procedure, but at once open down and penetrate the centre of destructive changes. By delay the suppurative processes advance upward, penetrate the capsule and infect the joint.

In general, an early operation here will obviate the necessity of either a resection or an amputation.

* * *

Dr. D'Arcy Power (Brit. Med. Jour., No. 1726, p. 412) calls attention to the frequency of a dilatation of the synovial capsule prior to tubercular ostitic inflammation of joints in children.

When this is recognized early and a free incision is made, conjoined with antiseptic lavage, a cure is generally prompt and permanent.

He cites four cases which were thus treated and promptly cured in his own practice, while another, in which operation was refused, went on from bad to worse and died.

BIPOLAR OSTEOMYELITIS OF THE TIBIA.

M. Cartillet (contribution Coc. Des. Scien. Med., Lyon, Feb., 1895; Annales D'Orthop., March, 1895) has presented the details of a highly interesting and unusual case of central suppurative inflammation of the tibia in a boy of 16 years of age.

His trouble was of about three months' duration. Cartillet, having diagnosed the case decided that it undoubtedly was one of bipolar suppurative diseases, commenced by tapping the superior epiplysis of the tibia, which was filled with pus; then he went down and trephined the in-

ferior head at the ankle, after which he carried an incision through all the tissues on the inner aspect of the shaft from one opening to the other. Now the entire medullary cavity was opened, dead sequestra and inspissated pus cleared away. After this the hollow cavity was closed with sutures, though the ends were left open for drainage.

Recovery was rapid. The constitutional disturbances immediately subsided, appetite returned and his full strength was regained.

EUROPHEN IN RHUS POISONING.

At this season of the year the physician practising in the country or in one of our numerous summer resorts is frequently called upon to treat cases of dermatitis venenata, or cutaneous inflammation due to the poison ivy or poison sumach. As is well known, some persons are especially suceptible to this affection, which is of an eczematous character. There is marked swelling or odema of the affected parts and an intolerable sensation of itching and burning, and the patient's efforts to relieve these by scratching and rubbing add to the existing irritation and produce extension of the inflammation. Among the favorite methods of treatment of rhus poisoning are lotions of carbolic acid, acetate of lead, grindelia, zinc phosphate, but recently Dr. W. R. D. Blackwood, of Philadelphia, has called attention to the relief he has himself experienced in this affection from the use of europhen. "Some years ago," he writes in the Charlotte Medical Journal, June, 1895, "after being fire-proof to this disagreeable complaint I got a dose which made life a torment for awhile. As I had quite a number of surgical cases on hand just then I was handicapped and wished that all such plants as the rhus family were relegated to the centre of Africa. With this trouble in memory, last year I got hold of a bad case of poisoning through sumach, and as an experiment I tried europhen,and with the most satisfactory success. Let me urge my friends to try this when the summer brings out the new crop of poisoning of this variety." The value of europhen in various affections of the skin has been established by numerous observations, and it is, therefore, well deserving of a trial in cases of so-called ivy poisoning. For this purpose it may be employed in a 10 to 30 per cent. ointment with vaseline, a solution of the same strength in almond oil or a dusting powder with talcum varying from 25 to 50 per cent. according to the degree of cutaneous irritation present.

Electro-Therapeutics.

IN CHARGE OF
DR. S. H. MONELL, New York.

STATIC ELECTRICITY — METHODS OF ADMINISTRATION.

Article 2.
(Copyrighted.)

This subject, usually passed briefly over in most writings upon static electricity, may fairly be considered of great importance to the therapeutist, and it is my purpose to treat the matter more fully than has yet been done in any article or book that has so far come to my notice.

Physicians accustomed to the administration of electric currents created by chemical action are apt to be somewhat confused when they first attempt the application of static electricity. In both galvanic and faradic administrations the patient is placed in a circuit closed and made operative by the sensible contact of two moist or metallic electrodes with the surface of the body or its cavities.

Similar methods, indeed, are pursued in employing the Leyden jar induction current obtained from the static machine, but in general the method of applying static electricity is in marked contrast to these.

Instead of placing certain tissues or portions of the patient's body between two electrodes, and affecting chiefly or only the included parts, and employing a current with a direct circuit flow and little or no lat-

eral dispersion, we transform our entire patient into one great electrode by seating him upon the insulated terminus of the active pole of the machine.

The other pole is usually connected with the earth and may be wholly disregarded in general treatment. When the machine is started into action a separation of the collected electricity into positive and negative takes place. Each dissociated portion of the electric force, being self-repellent, strives to escape from the inclosing case of the machine by a separate channel, and the result is a continuous flow from the higher to the lower potential. The flow from one-half of the revolving glass plates is carried off to the earth by the chain attached for this purpose to the unused conductor, while that from the opposite half of the plates is conveyed by a conducting rod or chain to the insulated platform, where its downward flow is headed off and a remarkable phenomenon takes place. Unable to pass down the glass supports of the platform to reach the great negative magnet, the earth, the swift output of the machine accumulates like a fast rising flood, escaping upward and outward at every point where the tension of insulation gives way. The accumulation from a powerful machine is thus sufficient to form a great electric pool upon the platform, in which the patient is invisibly bathed, becoming electrified with the same potential as the prime conductor to which he is attached; and he is charged everywhere alike throughout every tissue, filament and fibre of his body, for it is a law in electrics that "the potential inside a conductor has the same value as at any point on its surface."

There is no clothing to remove, no current direction (ascending or descending) to take into account, and no rheostat is required to govern the current strength.

The individual upon the platform is simply permeated from foot to head, not with a galvanic streak shot through him from point to point, but an electric force of illimitable dispersive power, and a penetrating energy that laughs at the resistance of the human tissues.

Without accumulation there could be no therapeutic employment of static electricity, owing to the small quantity of the current stream.

With these preliminary remarks I shall now attempt to describe the various methods of administration.

Of the usal electrodes furnished with machines two are of paramount importance, viz., the point and ball. The chief routine methods of application are three, viz., electrification, breeze and sparks.

In addition, this form of electricity may be employed in a greater variety of ways by an expert than both the galvanic and faradic currents combined. It will be difficult to describe them all in a limited paper, but it may be stated in general that in static administrations no nicety of skill is wasted. Practice, intuitive perception of what each case requires, discriminating judgment, gentleness, caution, tact and trained mechanical adroitness will all be found of the utmost value in contributing to satisfactory results. Let us select a series of cases for treatment and illustrate the methods we may employ. Before admitting our patient we have first inspected the machine, ascertained that it is charged and in working order. We now place the platform in position in front of the machine and about two feet removed from it. The platform is then attached to the selected prime conductor of our apparatus by means of the rod furnished for this purpose, or, if we so desire, by means of a chain, wire, or any metallic connection. The opposite pole is now grounded, to conduct away the unused potential and establish the current flow. In most cases the negative pole is grounded, as we usually desire to electrify the patient positively. An ordinary chair or stool is now placed upon the platform. It may be any form of wooden, cane, leather, or upholstered chair (rocker, reclining or otherwise), but must be devoid of all metallic ornamentation, such as fancy-headed nails around the seat. We have now only to ask our patient to step upon the platform and sit down.

We see that her dress does not drag upon the floor at any point, to leak off the current, and we are ready to start the machine into action. The plates revolve, a slight crackling sound is heard as the current issues forth, accumulates and escapes; and complete electrification is shown by the loose hairs on the patient's head, which stand tensely out in all directions. The insulated person is agreeably conscious of the electric charge, but experiences no marked sensations. We may subject her to this simplest form of treatment for 15 or 20 minutes, and find that it is an admirable and restful tonic, and that the tenderest infant could not complain that it was unpleasant. It is the foundation and starting point of all static treatment.

But suppose it is the summer season and the day is damp, and on this account we find the electric output too small to charge our patient sufficiently while the rod rests upon the surface of the platform. We can augment the charge by turning the plates faster to increase the flow, and, to prevent loss en route to the patient, we alter the method of connection to a direct metallic contact. To do this the patient may either hold the rod or chain in her hand, or place her foot upon a metal plate, or simply stand on the end of the chain attached to the machine. Either method will at once impart a vigorous increase to the electric charge, as none of the current is now wasted through poor conduction.

If for any reason we wish to reduce the energy of the charge, we reverse the preceding steps, slow down the machine and remove the conducting rod to the distant corner of the platform. Thus all necessary modifications may readily be made, and the effect in practice corresponds to the action of a rheostat or current controller. What we have applied to the patient has, however, been in the nature of a continuous current; and, inasmuch as certain effects are dependent upon intermittent action and rate of electric change in the body, we will now treat our patient with an interrupted current. She is still seated as before, and continues to be electrified. We make no change in her relation to the machine, but we hold our ball electrode, attached by a chain to a gas fixture, near any part of the positive pole. If we hold it very near we get a rapid succession of exceedingly fine interruptions, every spark representing a complete break in the current. Between this near distance and the longest distance at which we can get a spark—say four or five inches—we may obtain all the variations in interruption that can be produced by faradic vibrators. By sweeping the electrode past the pole a single spark at a time will give us as slow an interruption as may be wished for special purposes. We may also adopt an entirely different method of interruption, and in certain cases we prefer to do so. The patient now holds the platform end of the conducting rod, while the machine end is not hooked upon the pole, but is rested against the case so that it drops a half inch or inch below the pole on its way to the patient. This results in breaking the continuity of the metallic conduction, gives us a stream of sparks, and interrupts the current either finely or coarsely, as we may desire, according to the length of spark drawn. If it requires additional intensity we have only to attract the current out of the patient on the opposite side or above the head, or at any point where local effect is indicated. The force of the flow is instantly increased. These two methods are useful in many ways and will be studied in greater detail later on. In their various forms of applicability they constitute a method original with the author, and are an addition to previous methods employed.

But our patient complains, for instance, of a severe nervous or congestive frontal headache, and requires something more localized than general electrification, which, however, does not stop, but goes right along with every after process, and contributes its quota of benefit to the entire sitting. We take up the point electrode, attach it to a chain, the distal end of which we may hook to the negative pole of the machine; or

to a gas fixture, water pipe, or furnace register, or any metallic body which will conduct the discharge to earth. By now holding the electrode cautiously near the seat of pain we apply to our patient the static breeze. Upon the bare forehead and throbbing temple it plays like a cool zephyr, bringing ease and relief at once in the great majority of cases, and removing pain in from five to 15 minutes. It is the most exquisitely delightful of all electric applications, and is hardly surpassed in importance by static sparks.

FIRST AID IN ELECTRICAL ACCIDENTS.

Hedley (Lancet, February 2, 1895) says that the purely medical aspect of electrical accidents may be summed up roughly in Arsonval's rule, that "one suffering from electric shocks should be treated as one who is drowned," not forgetting, however, that syncope rather than asphyxia is sometimes the prominent symptom. If the body of the injured, however, is still in contact with the electrical circuit there are three possible conditions to be considered.

(1) The body by contact with two conductors of different potentials may have short-circuited the current. Such a contact is usually at once fatal.

(2) The body in contact with one conductor may have taken part of the current to the earth. The gravity of this accident will depend upon the nature of the contacts.

(3) The body by being in contact with two points of the same conductor—e. g., holding by both hands—may have become the seat of a derived current. This in itself is the least dangerous of the accidents.

Whatever the nature of the accident, the first thing is to stop the current if possible. If this is not practicable, the body of the injured person must be detached at once from the conductor. The "first aider" must in self-defense insulate himself from the conductor, the body of the injured and the earth. To do this the hands must be covered with several layers of some dry material, such as several thicknesses of a garment. He must at the same time stand upon some dry wood, clothes, or straw. He may then detach the body from the conductor, and at the same time lift it from the ground. If at all practicable the current may be stopped by cutting the wire, or it may be short-circuited by placing an iron rod between it and the ground.

Surgery.

IN CHARGE OF
DR. T. H. MANLEY, New York.

THE SURGICAL TREATMENT OF PULMONARY CAVITIES.

From a study of the present aspect of the surgery of the lungs, Dandridge (Annals of Surgery) concludes that a certain number of pulmonary cavities can be successfully dealt with by incision and drainage. Tuberculous cavities in the lower portion of the lungs, if single and superficial, and if the general condition of the patient permits, should always be opened. Cavities at the apex should only be opened when there is free and persistent fetid expectoration that has resisted treatment and the remainder of the lung is not involved. Abscess, gangrene and hyatid cyst should be opened and drained whenever they can be located. Closure of the pleura should be insured before the evacuation of a cavity is attempted. In case of pyo-pneumothorax the fistulous track should be explored, and any cavity freely laid open by means of the cautery. Cavities that have been opened are best treated by packing with gauze, preferably impregnated with iodoform. The further careful trial of such agents as iodoform, chlorin-gas and zinc chlorid is desirable to determine whether or not the tuberculous infiltration may be modified by them. It is also desirable, for the further extension of surgical interference in pulmonary cavities, that the means of locating such cavities and of determining their size and the exact character of the tissue that overlies

them should be perfected by further study and for the accomplishment of this, the surgeon must look to the physician.

THE HISTORY OF VAGINAL HYSTERECTOMY.

Vaginal hysterectomy is now recognized as one of the triumphs of modern surgery. This operation, according to Greig Smith, was performed for prolapse before the Christian era. This operation, brought forward in 1813 by Langenbeck, like almost all noted operations, passed through many vicissitudes. It has been successful in the hands of some and unsuccessful in the hands of others. Langenbeck was very skillful in performing the operation, while many French and German surgeons met with poor results. This brilliant operation fell into disrepute until fifteen years ago Czerny took it up. The mortality was at first very high, but now it is just as low, so low, in fact, that some surgeons of Europe perform it on diseases other than cancer. Among those prominent in its improvement are Pean, Segond, Jacobs, Sanger and Landou. I think Jacobs claims to have removed the uterus, tubes and ovaries, per vaginum, in 140 cases, with a death rate of only 14 per cent. The opinions among leading surgeons at the present time seems to be that the entire uterus should be removed and partial operations should be abandoned. By removing the entire organ we get a lower mortality and better results. —Charlotte Med. Jour., June, 1895.

THE NATURE OF CANCER.

The dreadful malady still remains a great mystery to the many scientists. Dr. Duplay, of Paris, expressed the opinion at the International Congress, held in Buda Pesth, that, judging from recent microscopical and experimental work, the etiology of cancer still remains unsolved. In his opinion the theory of the existence of sporoza in cancer, which by some is accepted quite readily, he thinks to be more and more doubtful, as research is pushed further, and it is necessary, since the usual histological methods of fixing and straining have not given satisfactory results, to resort to new methods—in particular, close attention should be given to the examination of fresh tissues. Recent experience is believed by M. Duplay to point strongly to one species cannot be communicated by inoculation to an individual of another species, and that within the same species it can be transmitted from one individual to another only under very exceptional conditions, not yet understood, though hereditary predisposition perhaps plays a certain part. According to the observations of Dr. Yarok, of Buda Pesth, he is satisfied that the bodies regarded as psorosperms in cancer are nuclei, nucleoli, epithelial or migratory cells, red blood cells, or products of degeneration.—North American Medical Review, June, 1895.

APPENDICITIS.

Gay, in the Boston Medical and Surgical Journal of January 31, 1895, emphasizes the fact that a patient with recurring or "sleeping" appendicitis is in constant danger of an explosion, which may prove fatal in spite of the most prompt and skillful treatment.

By way of summary the following facts are given as indicating operation:

1. In very severe cases, immediately.

2. In moderate cases in three or four days, if the symptoms are not progressing favorably.

3. In slight cases, if they do not get well in reasonable time, or do not steadily progress toward recovery.

4. In cases attended with frequent exacerbation without any distinct interval.

5. In recurring cases, and, as a rule, in the interval after the second attack.

6. Cases of doubtful diagnosis, in which the symptoms do not subside within a reasonable time, may be subjected to exploratory incision, with the expectation that more good

than harm will be done in the long run.

7. Patients who must live out of reach of competent medical attendance, as well as those in the humbler walks of life, may require operation under circumstances not otherwise advisable.

SARCOMA OF THE KIDNEY IN CHILDREN.

In a very excellent article on this subject in our valuable contemporary "Medicine," Dr. D. A. K. Steele, of Chicago, concludes as follows:

From the literature of this subject I think we may fairly deduce the following conclusions:

1. These new growths of the child's kidney are often congenital.

2. They are usually unilaternal; when bilateral it is from secondary infection of the other kidney.

3. They are primary extra-renal, and surround rather than infiltrate the renal tissue.

4. Round-celled is the most common form of these sarcomas.

5. They are of exceedingly rapid growth, and destroy life by exhaustion.

6. They are uniformly fatal when treated medically, the duration of life being from four to twelve months from the time the disease is first observed.

7. Nephrectomy offers the only hope of cure or prolonging life in these unfortunate cases.

8. More accurate early diagnosis and prompt operative interference has lowered and will continue to lower both the primary and secondary mortality.

9. The extra-peritoneal route is preferable when the tumor is small.

10. When large, a trans-peritoneal incision is imperative.

11. It may be either transverse or vertical; considering the nerve supply of the parts, the transverse would seem the better.

12. The operation of nephrectomy in these cases is justifiable, and we are not doing our duty as surgeons to our little patients if we withhold the only chance for life.

RECTAL RESECTION IN THE FEMALE—VAGINAL METHOD.

Plug the rectum with antiseptic gauze and disinfect the vagina thoroughly. Incise the posterior vaginal wall and separate it from the diseased gut. Incise the perineum in the middle line, and isolate, ligature and divide the rectum below the seat of disease. Draw the upper and cancerous portion of the gut through the vaginal wound and excise it. The advantages of the method are that there is but little hemorrhage, the diseased parts can be freely exposed, an opening in the peritoneum can be easily dealt with, and enlarged glands in the mesorectum can easily be removed.—Universal Medical Journal, June, '95.

OPERATIONS FOR CANCER.

Dr. Roux, of Lausanne, discussed this subject and remarked that the former teaching concerning constitutional cancer, the absence of antisepsis, and the fear of relapse discouraged the most intrepid surgeons from attempting on malignant tumors any but insignificant and palliative operations. From the characteristics of cancer he admits that it is a parasitic disease resembling tuberculosis in its clinical evolution; it is necessary, therefore, to attack it with the same energy and promptness as the latter affection. Too often we operate too late, when it is impossible to prevent a relapse. This fact filled the earlier statistics and continues to darken the present ones. As soon as the diagnosis is assured we should intervene by the bloody method, always making a systematic and carefully-detailed toilet of the ganglionic chain, even if it is healthy in appearance. That the principal cause of relapse in the late period at which we operate is proven by his personal observations upon three groups of cancer cases: those of the breast, the uterus and the gastro-intestinal tube. The operable cases of cancer of the stomach reached 12 per cent.; those inoperable, 88 per cent., a part of which were susceptible of palliative operation. The mor-

tality from pylorectomy for cancer was from one-fifth to one-seventh; that from gastro-enterostomy, one-seventh. For cancer of the uterus there was 68 per cent. of the cases inoperable and 32 per cent. operable, only one-fourth of which were operable by the sacral method. The mortality from vaginal hysterectomy was 8 per cent., and from sacral hysterectomy 11 per cent. As regards cancer of the breast, for which intervention is most easy, he counts twelve absolutely inoperable cases, while in more than 50 per cent. of the cases it was possible to predict an early and fatal relapse. The mortality reached 5 per cent.—that is to say, it was equivalent to the general mortality of all the operations. There is no doubt that early operations will prevent relapses, since in the deplorable conditions under which we now operate we actually have some cures. He cited at hazard cases of gastro-intestinal cancer without apparent relapse for three years; cancers of the rectum without relapse after four years; a cancer of the uterus, which had invaded the vesical walls; a villous cancer of the kidneys, of extraordinarily difficult extirpation and without relapse for five years. He had removed the tongue in a case that had relapsed nine years after an operation by Dr. Kocher. Among his cases was one of survival for eleven years from cancerous goitre, and a cancer of the testicle that had not relapsed at the end of twelve years. Histological examination had left no doubt as to the nature of these tumors.—University Medical Journal, June, '95.

THE TREATMENT OF MALIGNANT TUMORS BY THE TOXINES OF THE STREPTOCOCCUS OF ERYSIPELAS.

At a meeting of the American Medical Association, held in Baltimore, Md., May 7 to 10, 1895, Dr. Senn, of Chicago, in a paper on the above subject stated that the treatment had proved unsuccessful in all the cases in which he had tried it. In many of the cases reported as successfully treated by the toxines, the diagnosis of the tumors had not been verified by clinical or microscopic examination. In nine cases he had used from 25 to 75 injections, of from three to fifteen minims, the toxines being derived from three different sources. He not only failed to effect a cure, but in some instances the condition seemed to be aggravated by the injections. He resorted to the treatment only in inoperable cases.

In the discussion of the paper, Dr. Coley stated that he had treated 84 cases during the past four years. They were all malignant—43 sarcomas and 27 carcinomas. Eleven sarcomas and two carcinomas were cured. Three of the cures, at present, were of two years' standing, with no symptoms of recurrence. Until the present, he had advocated the use of the toxine in nothing but sarcoma.

Dr. Fenger, of Chicago, had used the remedy in twelve cases without benefit.

Dr. Wyeth, of New York, suggested that the injections might do good through their inflammatory action, destroying the rank cells of the tumor.

Dr Herring had seen an attack of erysipelas aggravate a large malignant growth upon which he had operated unsuccessfully.

Dr. Keen stated that the remedy had failed in his hands in sarcoma and carcinoma, except possibly in one instance.—University Medical Magazine.

Medicine.

IN CHARGE OF

Dr. E. W. BING, Chester, Pa.

THE ALTERNATING TREATMENT OF DIABETES.

ROBIN.

Bull. de L'Acad. de Med.

I.—INDICATIONS FURNISHED BY NUTRITION.

"The treatment of diabetes which I am about to submit has no new methods, but consists simply in the employment of means already known, but associated in a particular man-

ner and selected according to the action they exert over nutrition.

Excluding pancreatic diabetes, which forms a class apart, two theories are in favor among physicians, to wit: the hypersecretion of sugar and the deficit of consumption by retarded processes of nutrition.

From which there have arisen two totally opposite systems, one of which is to moderate the production of sugar by retarding nutritive changes, the other to accelerate the combustion of sugar by stimulating general nutrition. Before commencing treatment choice must be made between these theories. The study of the systematic changes in the patient is made use of to settle the question. If the disease is due to a failure in the consumption of sugar the changes should be retarded and vice versa. But in 1889 I showed that there was in true diabetes an exaggeration of all the chemical acts of general nutrition, with over-activity of certain organs, as the liver and nervous system. This should be the point aimed at in treatment, therefore drugs should be chosen among those agents which retard the general mutations, and particularly those of the nervous system, and at the same time by appropriate regime substances convertible into sugar, are withdrawn, giving the hepatic cells rest and reducing their over action.

II.—ORGANIC DEMINERALIZATION IN DIABETES.

There is in this disease a marked tendency to this process. As the inorganic principles form a skeleton to the cells and are one of the essential constitutents it is important that this loss be obviated. The process may be seen in pretubercular demineralization and albuminuria of phosphatic origin. In a disease like diabetes where tuberculosis frequently appears as a complication this process should not be lost sight of, and the elements which are wanting should be administered.

III.

Indication in diabetes is best fulfilled by the following agents:

Antipyrin, alkalies and alkaline baths; bromide potassium, arsenicals, opiates, antispasmodics, quinine and cod liver oil. To obtain the maximum effect these must be separated into three principal groups—The first consists of antipyrine; the second consists of arsenicals and quinine; the third consists of the antispasmodics.

IV.

Alternating treatment in stages—the first is the essential of this treatment. Antipyrine—It lessens general disassimilation—the co-efficient of oxidation or of utilization of albuminoid matters and the oxidation of sulphur and phosphorus, proof of its moderating action on the mucous system. It is given in doses of two grammes per day, three being the maximum. It may be combined with bicarb. soda. It should not be continued for more than five days at a time, as it may produce transitory albuminuria. Contra-indications to its use are albuminuria, rapid emaciation, anorexia and pancreatic diabetes. The adjutants of this first step in treatment are cod liver oil, alkalis and laxatives.

V.

Second step in alternating treatment consists in giving, after the cessation of the antipyrine treatment, quinine arsenicals, which will reduce the functional activity and retard the chemical changes. With these laxatives may advantageously be combined. This period of treatment, like the first, lasts for 15 days, and now the third is employed. This consists of sedative and antispasmodics. General results from this method have been favorable.

TREATMENT OF NOCTURNAL INCONTINENCE OF URINE IN CHILDREN.

Cheron (L'Union Medicale, April 6, 1895) divides the treatment into—

(1) Mechanical—This is usually considered useless and brutal, but the meatus may be occluded by collodion at bedtime, which can be removed in the morning or an elastic bag may be introduced into the rectum or vagina (?). Tienhovers con-

sidered incontinence due to insufficiency of the vesical sphincter; he lifts the foot of the bed at night, and thus secures good results in many cases.

(2) Hygienic Treatment — The amount of liquid should be limited, and none taken with the evening meal. Cold perineal douches should also be given. The child may be wakened once or twice during the night. The sphincter may be educated by retaining the urine as long as possible in the day.

(3) Moral Treatment—The child should not be punished. The hypnotic suggestion has been tried in a number of cases, with excellent effect.

(4) Medical Treatment—Belladonna and atrophine can be used in such a way as to get their full physiological effect. Strychnine in full doses can also be given with excellent effect. Antipyrin, thirty grains, may be given in the course of ten days. Chloral and bromides may be given where there is a sensibility of the mucous membrane of the bladder.

(5) Electrical Treatment—Either the constant or faradic current may be used, and must be applied directly to the sphincter. Massage of the sphincter directly by introduction of one finger into the rectum may be practiced. Several other methods which seem to the abstractor would be rather harmful, morally, than beneficial.

TREATMENT OF PHAGEDENIC CHANCRE.

Dr. E. Braatz (Centralblatt Fuer Chirurgie) warmly recommends treating phagedenic chancres with topical applications of cupric sulphate. He employs a solution, for with the powder a crust is formed, under which the ulcer continues to progress. The ulcer is cocainized with a 10 per cent. solution, the undermined edges trimmed away and then the ulcer cauterized with a 1.5 solution of the sulphate; compresses are afterwards applied, wet with a 1.5000 solution. These latter at first renewed three times a day, later once a day, and are covered with a strip of rubber protective. As the pain of cauterization often continues some time after the cocaine has ceased to act, a morphine injection may be given either before or after. On account of the obstinate character of the affection the cauterization may be required to be repeated several times before the process is cured.—Ex.

ABORTIVE TREATMENT OF GONORRHEA.

Guiard's treatment of gonorrhea by means of frequent washings out with weak solutions of permanganate of potash is certainly the most effective way to abort gonorrhea. He uses a vessel of a capacity of about 2 litres for holding the solution; attached to this is a rubber tube 2 metres in length, fitted with a glass cannula and tap, so arranged as to be workable by the same hand that holds the nozzle in the penis. If the inflammation is confined to the anterior urethra, only a small quantity —about 5 or 6 grammes—is allowed to flow in, and then immediately voided. About half a litre is the utmost that should be used at one sitting. The best results are obtained with weak solutions, for example, 1 in 10,000, the maximum being 1 to 5000. There should be two washings on the first, second and fourth day. On the third and last four days of the eight days' treatment only a single washing out is advised. The results obtained are very satisfactory. The stains produced by the solution may be removed by a 20 per cent solution of bisulphide of soda.—Charlotte Med. Jour., June, '95.

APPLICATION OF LEECHES.

The application of leeches to the temple is often of great service in relieving pain and subduing inflammation in the eyes and their appendages. The leech is best applied by putting it in a large test tube partly filled with water. When this is tilted so that its open end and the mouth of the animal come in contact with the skin of the temple, the leech feels so much at home in his native

element that he promptly bites the skin when he touches it and sucks himself full of blood. Artificial leeches are small cylindrical cups applied over a cut in the skin, made either by dividing a fold of it with a bistoury or by cutting it with a revolving circular knife constructed for the purpose. In using the latter care should be taken not to cut to an equal depth all round, otherwise the little wad of skin thus made is so far drawn above the level of the surrounding skin by the exhaustion of the cup as to cause an unnecessary difference of level and subsequent deformity. (Exhibition of Heurteloup's artificial leech).—Universal Med. Jour., June, 1895.

CONCLUSIONS ON VENEREAL DISEASES.

BY DR. J. T. JELKS,

Hot Springs Med. Jour. (vol. iv., No. 5.)

1. That venereal diseases are as old as prostitution, and that the latter is as old as the human race.

2. That clandestine prostitution is much more dangerous to the health of the community than licensed and medically inspected women.

3. That while we quarantine against small-pox, scarlet fever, diphtheria, yellow fever and cholera, and the State attempts to prevent the spread of the same, yet

4. We hold up our hands in holy horror at any attempt to regulate the "social evil."

5. That police supervision and medical examination of prostitutes should be practiced by every community.

THE RADICAL TREATMENT OF LUPUS.

R. T. Cesar (Lancet, April 6, 1895) refers to Mr. Bidwell's report of six cases in the Lancet of July 21, 1894, and to his statement that Mr. Watson Cheyne is credited with being the first to operate on lupus by excision and skin-grafting. The writer states that twenty years ago he operated on a man, aged 62 years, with lupus of the face; it was "much larger than a half-crown piece." He made a deep incision all around the edges, and then dissected up to the floor of the ulcer entire. Dry antiseptic dressing was applied and a permanent cure resulted.

Ten years ago he treated a lupoid ulcer two and a half by one and a half inches in extent, on the cheek of a boy, aged 8 years, in the same manner. He thinks this treatment better than curetting, and he does not regard skin-grafting as essential.

OPEN-AIR TREATMENT OF WHOOPING COUGH.

Ullmann, after pointing out the failure of all suggested "specifics" for whooping cough, and the little effect which drugs of any kind have on the frequency or the severity of the paroxysms of cough or the duration of the disease, proceeds to urge (Jahrb. f. Kinderheilkde, Bd. xl, H. i, S. 39) the value of open air (freiluftcur). He relies chiefly on the consideration that under ordinary circumstances the patients have fewer paroxysms during the hours in which they are out of doors. To establish this he quotes records of the paroxysms in certain cases. Thus, in one case, while indoors, the child (aged 18 months) had a paroxysm on an average every 48 minutes, while out of doors it had one every 91 minutes. In another severe case the child had nearly three times (2.74:1) as many paroxysms indoors as out of doors. In a mild case the difference was less (1.4:1). The difference in all the cases varied on different days, but it was on the whole sufficiently marked to strike and convert the parents, at first disposed to distrust the advice given. He states that a threatening paroxysm may be arrested sometimes when in the house by carrying the child to an open window, where it takes several deep inspirations, and the feeling of distress and anxiety which precedes the paroxysms passes off. Ullmann recommends that in summer and on fine days in winter the patients should be kept out of doors—not for a few hours only, but from morning to evening. He attaches much importance to their being given their meals out of doors. The parox-

ysm of cough and vomiting which so commonly follow a meal is thus in many instances avoided, and the serious deterioration of general nutrition liable thus to be produced is prevented. He does not look on bronchitis or even broncho-pneumonia as a contraindication of the open-air cure.

INTRAVENOUS SUBLIMATE INJECTIONS.

Gorl (Munch. med. Woch., May 14, 1895), gives details of nine cases of various forms of syphilis which he has treated in this way. He uses a solution of sublimate of 1 in 1000, and injects 1 to 2 to 5 c. cm. As experiments have shown that the sublimate is not entirely excreted in the urine on the first day, the author gave the injections every second or third day. He has never seen unpleasant symptoms. The pain that was complained of in Blaschko's cases the author would attribute to the strong solution used. If the vein is properly entered no pain is felt. The pain is caused by the escape of the solution into the connective tissue. The advantages of this method of treatment are (1) the small quantity of sublimate used; (2) the rapidity of the cure; (3) the absence of danger so far as at present known, and (4) that the treatment can be carried on without interfering with the patient's occupation. The disadvantages are (1) the impossibility of making the injections if the veins are not accessible; and (2) the rapid appearance of relapses. The latter is the most serious objection. These injections are to be used only when the intramuscular or subcutaneous injections are objected to owing to pain, or when inunction or administration by the mouth is impossible. They are also indicated in the tuberculous or in those peculiarly susceptible to mercury or when a rapid effect is necessary, as in cerebral syphilis.

TYPHOID ANTITOXIN.

Peiper and Beumer (Wiener klin. Rundschau, May 12, 1895), at the Congress for Internal Medicine at Munich, referred to their earlier experiments, which showed that the toxin of typhoid cultivations is contained chiefly in the bacilli themselves, for after pasing a cultivation through a Chamberland filter the filtrate was less virulent than before. The bacilli are killed, without damage to the virulence of the cultivation, by warming for an hour at 55 degrees to 60 deg. C. Their recent experiments show that by repeatedly injecting small quantities of virulent cultivations into sheep antitoxic substances are formed in the organism which prevent the poisonous action from showing itself. The action of this antitoxic serum depends on its power of destroying not the bacteria, but the poison. By injecting previously or at the same time antitoxic serum, mice and guinea pigs were protected with certainty against double or treble the fatal dose of a virulent cultivation, and even if injected with the antitoxin one to four hours after the fatal dose was given, they could be cured.

Miscellany.

FURTHER CONTRIBUTIONS ON HELIUM.

New discoveries, however astonishing, soon get left behind by the advancing army of science, like milestones on the road of progress. Scarcely have we overtaken argon and helium when Professor W. Ramsay is promising us not one but two new elements belonging to the same series. According to his paper, read before the Chemical Society on June 20, there is no doubt that argon and helium contain as a common ingredient a gas not hitherto identified, with a probable atomic weight of about 10 referred to hydrogen as unity; for two lines in the spectra of the newly discovered elements are absolutely identical. From the anomalous position of argon in the periodic scale, Professor Ramsay regards the presence of another element with argon, having an atomic weight of a little more than 80, as almost certain,

and, indeed, this would account for many discrepancies. The velocity of sound in helium has been determined, and it has been proven that helium, like argon, is monatomic, and that all its energy is taken up in motion of translation, there being no internal work. It follows from this that the hypothetical element common to the crude helium and argon is also monatomic. The density of helium is about 2.2 as far as we can tell at present, and not 3.9 as wrongly reported previously. When the second element has been separated from helium its density will be brought down still lower. To clear up a possible misconception we may state that argon has never been obtained from any other source than the air, and that helium has been extracted from various rare minerals by the action of acids. It is impossible for helium to exist in our atmosphere, as the gravitational force of the earth is not able to keep these light atoms, which are thrown off into space by the centrifugal force of the earth's rotation. All the uncombined helium of our planetary system is probably concentrated in the sun, unless that enormous planet Jupiter has managed to retain some. It is interesting to note that helium is by far the most insoluble gas known, for water dissolves only about half as much helium as hydrogen or nitrogen. This will afford a convenient means of separating helium from other gases, and as it seems to be contained in many rare minerals of the uranium and thorium type we may hope that before long larger quantities will be available for the purpose of experiment. Besides the isolation of the two hypothetical gases we have spoken of, Professor Ramsay looks forward to investigating the actual condition in which helium exists in minerals, for he has found that these substances will not reabsorb helium when once it has been extracted from them. The last meeting of the British Association was marked by the discovery of argon, and it is reasonable to hope that the forthcoming session may witness further additions to our knowledge of these remarkable gases.—Lancet.

THE COTTON STATES EXPOSITION.

For the past ten days a perfect deluge of water from the Atlanta City Water Works, has been pouring into the lake at Piedmont Park, the site of the Cotton States and International Exposition at Atlanta, and in a short time the immense basins which make up the two lakes will be filled with crystal water. The lake extends for nearly half a mile along the foot of the immense central plaza, skirting many of the prinsipal buildings. It will be covered with gondolas and electric launches, and will be one of the features of the Exposition. In the centre of the main basin will be the electric fountain, designed by the constructor of the electric fountain at the World's Fair. This fountain will throw a solid stream of water a hundred feet high in the air, and innumerable sprays and side jets, brilliantly illuminated from below the surface of the lake by electric lenses, will add to the gorgeous beauty of the fountain

A regular hospital will be established on the grounds, and an ambulance corps organized to take care of any persons suffering from sudden illness, accidents or other troubles requiring medical attention. The corps will be very efficient, and will doubtless be of great service.

One of the greatest spectacular performances at the Cotton States and International Exposition will be the reproduction in fireworks of the storming of Wei-hai-wei in the recent war between China and Japan. The performance will begin with the first night of the Exposition and continue every night for nearly a month. Immense scaffoldings will be erected on the north end of the lake, on which will be stretched the painted scenery of the company. The position is one that may be plainly seen from almost any part of the grounds. Hundreds of real Chinese and Japanese will be in the production, and the sight will be extremely realistic. The attack of the Japs will be made from the lake in ships modelled after the Japanese war vessels. The storming

parties will land and in the face of a terrific cannonade and the City of Wei-hai-wei will be taken by storm. Over a thousand dollar's worth of fireworks will be burned at every performance. It is probably the grandest and most realistic scenic production of the age, and will be one of the greatest attractions in the spectacular way at the Exposition.

SOMATOSE BISCUITS.

We are in receipt of a package of Somatose biscuits from W. H. Scheiffelin & Co., New York. These biscuits contain ten per cent. of Somatose, which is a tasteless and odorless extract of meat, consisting of its albuminous or nourishing elements and its nutrient salts in a concentrated and digestible form. Somatose is much more nourishing than meat; does not overtax the stomach, and can be administered in gastric and intestinal troubles where meat would not be tolerated. It is completely utilized in the system and produces a rapid gain in flesh and strength.

Somatose biscuits have been prepared with a veiw of supplying an agreeable, appetizing and nourishing food for invalids and feeble persons. They constitute an important addition to the diet in wasting diseases, such as consumption, anaemia, and during convalescence from acute diseases. As they are readily digested and assimilated, much benefit will also result from their use in affections of the stomach and intestines, as dyspepsia, chronic diarrhoea, etc.

CORRECTION.

The price of "The King" fountain syringe, with thermometer attachment, sold by the C. R. Parmele Company, of New York, is $2, instead of $2.25, as incorrectly stated in our June 29 issue. This places the instrument on a basis with other syringes in price.

THE SERUM TREATMENT OF DIPHTHERIA.

Leichtenstern and Wendelstadt (Munch. med. Woch., June 11, 1895) report their experience based on 123 cases, and contrast their results with those obtained in 1353 cases before the serum period. For the purpose of comparison they devide these 1353 cases into 11 groups containing 123 cases each.

The cases of diphtheria admitted into the Cologne Hospital show very little variation in severity; in about 32 per cent. of the cases the larynx is involved. The diagnosis of diphtheria rests as hitherto upon cinical evidence. The authors maintain that they have seen improvement in the general and local condition of the patient as frequently before as since the introduction of the serum treatment. They cannot say with Kossel that every recent case of true pharyngeal diphtheria can be cured by the antitoxin used in sufficient amount, but they think that their results would have been even better if it had been possible to treat the cases earlier. The mortality among the 1353 cases amounts to 30.9, whereas in the 123 treated with the serum it was 20.3 per cent. The authors point out that the lessened mortality was not due to slighter cases coming under treatment. The number of tracheotomies amounted to 30 per cent. in the serum period as against an average of 32 per cent. previously. Contrary to other observers, they found that the mortality was not materially lessened. The mortality among the tracheotomized, however, fell from 64 to 43 per cent. This they would attribute to the arrest of the extension of the membrane into the bronchi. The effect of the local curative action is seen in the diminished number of the tracheotomized and in the lessened mortality after tracheotomy. Their experience shows that the serum is really entirely harmless. The authors also state that during the past fifteen years they have tried the various methods of treatment from time to time advocated, but that before the introduction of the serum very little change was noted in the mortality.

In Het Keekblad van het Nederlandsch Tydschrift von Geneeskunde, April 6, there is a report of the results obtained with Berhing's serum in the Children's Hospital, Amster-

dam, from October 24 to December 28, 1894. During that period 31 cases were treated, of which 6 died. The Loeffler bacillus was found in 20 out of the 31 cases. In 5 the diphtheria bacillus was present alone; in 10 it was combined with streptococci, in 2 with staphylococci, and in 3 with streptococci and staphylococci. There were two deaths, both of children under one year. Intubation and tracheotomy were performed in 11 cases. In six cases the symptoms of stenosis disappeared very soon after the injection of the serum, and in three in so marked a manner that tracheotomy, which seemed indicated, was dispensed with. The effect of the serum was equally remarkable in five cases in which no diphtheria bacilli had been found. A typical fall of temperature had been observed in very few cases, whilst in one case an alarming rise took place. The influence on the pulse and respiration was nil. In five cases the effect was decidedly unfavorable, producing collapse and cyanosis. Albumen was found in the urine in 16 cases; skin eruptions apepared in four cases as (1) an extensive infiltration at the place of injection, (2) urticaria, (3) a large macular eruption which appeared and disappeared several times, (4) a macular exanthem, accompanied by pain and stiffness of the larger joints. Paralysis, impeding deglutition, was noted in a few cases as after-complications.

RECOVERY FROM A LARGE DOSE OF COCAINE.

Walker (Lancet, February 2, 1895) cites a case of a man who had swallowed eight or nine grains of cocaine. His symptoms were constriction of the throat and region of the heart; great difficulty in swallowing; mental dullness. The pupil light-reflex was absent and the pupils were dilated. His appearance was that of a person partly under the influence of alcohol, but the most striking feature was the state of the muscular system. He resembled a bad case of chorea; the movements were slower, however, and more regular. The body was alternately rotated from side to side and bent at the same time, while the arms and legs were not still for a moment. He appeared to be constantly masticating, but could not swallow. There was some lividity of the lips. Amyl nitriate was administered with immediate benefit. All of the symptoms disappeared in about five or six hours.

ANTIKAMNIA---QUININE--SALOL.

The well-known therapeutical properties of these drugs make this combination desirable in such intestinal affections as fermentative dyspepsia, diarrhea, dysentery, duodenal catarrh, cholera infantum and typhoid fever. The Antikamnia controls the pain as effectually as morphine, and yet is never followed with any of those undesirable effects so characteristic of opium and its derivatives. Freedom from pain saves an immense amount of wear and tear to the system and places it in a much better position for recovery. The Salol acts as an antiseptic and removes from the intestinal canal the first or continuing cause of the affections just mentioned. The Quinine acts as a tonic, increasing the appetite, and thus contributing much to a speedy recovery. Hare says that quinine is not only a simple bitter, "but also seems to have a direct effect in increasing the number of the red blood corpuscles." A tablet composed of Antikamnia two grains, Quinine Sulph. two grains and Salol one grain allows of the easy administration of these drugs in proper, proportionate doses.

MICROBIC PATHOLOGY.

We have serious reasons for believing that adhesion to exclusive bacillary pathology does not obtain better results than clinical medicine in the great majority of cases, and, moreover, compromises the constitution of our patients.—Journal de Medicine de Paris.

The Times and Register.

Vol. XXX. No. 6. Philadelphia, August 10, 1895. Whole No. 883.

Original.

PREMEDITATION IN INEBRIETY.

Hartford, Conn.,
Superintendent Walnut Lodge Hospital, etc.

The frequent instances where inebriates in apparent possession of good judgment, go away and drink to great excess, displaying a degree of forethought and premeditation fully characteristic of all the ordinary events of life, are often very confusing to the ordinary observer. When the drink paroxysm comes all unexpectedly upon the victim, in some unforeseen state and circumstance, and he falls, it is dimly apparent that he is suffering from some unstable or diseased brain state, which has burst out from the application of some exciting cause. But when the paroxysm is anticipated and prepared for, and all the surroundings are made subservient to this end, when every facility to procure spirits are increased, when money is secured and business arrangements are made in view of this coming paroxysm, the conclusion most commonly reached by all non-expert observers is that it is deliberate vice and wickedness. When the history of a number of these cases is studied and compared, they are found to be well-marked cases of reasoning insanity, with drink paroxysm. These paroxysms are the acute attacks—the deliriums which expend themselves like storms that gather and burst—and are preceded by long periods of rest. A typical case is that of a banker, who is a man of excellent judgment in all business and social matters. He will prepare for a week or ten days in advance for a drink paroxysm. He is a temperance advocate, yet he will display great cunning to conceal the approach of this "spell." He will become very active in his temperance efforts. His friends realize his danger, and try by every means to help him, but find that all their efforts are turned to aid him in concealing it. He will not begin unless he can find some way to conceal his presence while the paroxysm is on him. When his friends were vigilant, he has been kept sober for a week or more, but with the first opportunity he disappears, and all their work has been thwarted by his cunning. In another case, the most deliberate reasoning and planning will mark the paroxysm. In another case, all at once he will rush away and drink in the most suicidal and insane way, only giving as an excuse some real or fancied injury or trouble. This deliberation and cunning is a symptom of mental unsoundness, and is most obviously reasoning insanity, and will be recognized when these cases are better understood. Dipsomaniac and periodical inebriety very soon became reasoning maniacs, dangerous because they are unknown and misunderstood.

Several very noted cases of capital crime by inebriates have brought out this fact of premeditation, with conviction, on the theory that disease and insanity were incompatible with power of conceiving and coolly executing crime. This theory is opposed by the facts in the history of such cases. The following is an illustration. A business man, who had drank at intervals to excess for ten years, had a preliminary period of moderate drinking before the stupor or the de-

lirium of the paroxysm of drink. During this time he continued his business as usual, but to his confidential friends he explained various schemes of revenge, in which he wished to punish persons who had injured him in business. These plans were skillfully and shrewdly arranged, and indicated a clear, unusual conception of causes and effects. The reasons for these acts were delusional, and based on strained inferences. His friends advised delay, and after the drink paroxysm, his recollections of these plans became indistinct, and his interest passed away. He treated them as crazy notions, and was ashamed to consider or talk about them. These delusions only appeared when he began to use spirits, and were concealed and only mentioned to his most intimate friends. This scheme of revenge comprised arson and murder, and the execution required a combination of studied acts that would mislead and mystify others. With but little encouragement he would have committed this crime, and premeditation and malice could have been clearly brought out in the trial.

In a second case a periodical inebriate whose preliminary period lasted from two to three weeks, planned a bank swindle. At about the time of its consummation he drank to great excess, having the usual paroxysm, then recovered and denied all knowledge of this event. While the act was very unusual and opposed to all his previous conduct and character, yet during the time it was planned he appeared to be very clear and fully conscious of all the nature and character of the act. The probability is that all acute reasoning and display of full consciousness of the act and its consequences is based on delusions, either concealed or openly confessed. The action of alcohol seems to suspend some governing centre, and capacity to disseminate the folly of the act. The mind appears to be eclipsed, and previous standards of truth and honor overshadowed. All the former vigor remains, or appears to be intact; judgment and reason display vigor and clearness in criminal acts and conduct. Motives and purposes of life have changed, although the form and semblance of the past conduct remains. One case always has a will within in this preliminary stage of the drink paroxysms. The will leaves his property in various ways, sometimes to one then to another member of the family. These wills are executed with great legal care and skill. A very rich man left a large part of his fortune to Southern schools. In the contest it was proven that the will was written on the eve of a drink paroxysm, but there was no evidence of other than full sanity. In reality, the act was a surprise to his friends, who had never heard any expressions of interest in this subject, although he was always confidential in his thoughts and feelings to them before. In the lower courts a wide variety of criminal acts, and strange conduct, that shows reasoning and cunning, are common, and dealt with as malicous and willful. Common illustrations are periodic drinkers who, after a free interval, begin to use spirits, then enter upon some scheme of robbery or swindling, and procure money, and then have a full drink paroxysm. The motive is clearly to procure means to have a drink paroxysm, and the reason apparent for obtaining it is never considered other than healthy brain activity.

Innumerable illustrations are seen among petty criminals, so called, where the acts have always preceded the drink craze, and always been executed while the victim was using spirits in small quantities. Premeditation, acute reasoning and apparent consciousness of acts and their consequences, preceding a drink excess, either associated with a moderate use of spirits or immediately before spirits are used in excess, should always be regarded as symptoms of mental derangement. Crime at this period is the work of dangerous lunatics, who are absolved from all restraint of law, fear of punishment, consideration of duty and obligations to others. This merges into a drink convulsion, which after a time subsides, and the normal balance of reason is restored. It is asserted in

courts that where persons using spirits moderately commit crime, they become conscious of it, then drink to great excess to conceal the motives and lessen the general consequences, or to drown the regrets of an accusing conscience.This theory is opposed by a study of cases, and is open to grave doubts. Dipsomania and periodical drink excesses are distinct convulsive symptoms of brain degeneration, that are preceded by changes of conduct and character, of which premeditation and cunning in criminal acts are marked signs and symptoms.

EXTENSIVE THORACOPLASY BY SCHEDE'S METHOD.

BY W. W. KEEN, M. D.,
Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Hospital.

A. K. S., of Blacklick Station, Indiana County, Pa., aged thirty years, was admitted to the Jefferson Hospital, March 11, 1894.

The family history is negative. He had all the usual children's diseases, and four years ago a severe attack of enteritis. Twelve years ago, after a severe attack of pneumonia, lasting six weeks, left-sided pleurisy set in. Two months later a small incision was made between the sixth and seventh ribs just to the left of the nipple line, and a drainage-tube was introduced. For fourteen months a small amount of pus escaped through the opening after removal of the drainage tube. Then the opening was enlarged, and over two quarts of pus were evacuated in twelve hours. A large drainage-tube was then inserted. He immediately began to gain in weight, and says that he gained thirteen pounds in the first fourteen days. Hs weight had been as low as ninety pounds, though he is six feet tall.

Status praesens: Weight, 145 pounds; appetite good, and he feels very well; no bloody expectoration. Between the sixth and seventh ribs, just to the left of the nipple line, is a drainage-tube which he has worn continuously for nearly eleven years. About half an ounce of pus escapes from it in twenty-four hours. Occasionally it is blood-stained, and he has had an even greater amount of blood escape when excited by coughing or by the introduction of a new tube, sometimes losing over a half pint of blood. The whole left chest is much sunken in.

Operation March 14, 1894. A vertical incision was made just outside the line of the nipple, and about two inches of the seventh and eighth ribs were resected, exposing the upper surface of the diaphragm. Starting from the opening in the chest cavity, it was with the greatest possible difficulty that I could resect the ribs, since they were absolutely in contact as the result of the deformity of his chest. The pleura was also over an inch in thickness, which made the thickness of the chest-wall about two inches, and therefore very rigid.

In addition to this the left lung was firmly bound down and so contracted that there was practically little lung tissue in use. Hence, as his respiration was almost confined to the right lung, I had to watch the ether very carefully, and by the time that I had resected these two ribs it was very evident that the operation should be terminated, and anything further left for a future date.

The wound was packed with iodoform gauze. Tis highest temperature after the operation was 99 8-10 degrees. The cavity of the chest was washed out with pyoktanin, boric acid, sublimate solution, etc., at different times.

He left the hospital May 28, 1894, in much better health, and with little annoyance from the large cavity remaining in the chest, from which the discharge was comparatively slight. He is to return for a second operation.

Second operation, Jefferson Hospital, June 30, 1894.—Examination by a long probe showed that the cavity of the pleura was very large and extended to a level with the clavicle. My intention was to resect as much of the chest-wall as possible. I was obliged to be extremely careful of the anesthetic, as I had been

in the previous operation, lest, having little more than one useful lung, the anesthetic and the operation together might prove fatal. I made a vertical incision from the clavicle to the still-existing opening into the chest cavity, followed by two horizontal incisions at each end of the first. I then dissected the soft parts from the ribs internally to within an inch of the left border of the sternum, and externally to a point an inch posterior to the anterior border of the scapula. Then, guiding a large pair of bone forceps by my finger, and starting from the existing opening, I cut ribs, muscles, pleura vessels and nerves, i. e., the entire thickness of the chest wall up to and including the second rib, then, starting again from the prior opening outwardly to a point a little in front of the inferior angle of the scapula skirting the upper surface of the diaphraghm, then from this point directly upward, and again horizontally on a level with the second rib. Most of this large mass, on account of its thickness, had to be removed piecemeal, part of it in two or three large pieces. The size of the portion removed was approximately eight inches vertically by five inches horizontally. A number of the larger intercostal arteries bled, but were seized with hemostatic forceps, and finally, even without ligation, on the application of very hot water, ceased bleeding. The inner wall of the cavity was found to be enormously thickened visceral pleura and pericardium, stretching like a verticle diaphraghm from front to back at a point about an inch external to the left border of the sternum. This was thoroughly curetted and swabbed. The flaps were then laid directly upon the thickened pleura and pericardium and sutured in place. His recovery was without incident, though slow. The reaction was very moderate.

October 6, 1894. He came to the hospital again to-day to see me, and I found the only remnant of the wound was a cavity about as thick as a lead pencil and an inch and a quarter deep. With light packing this will soon heal. His chest is very much deformed from falling in of the wall, but the cavity is entirely obliterated. His general health is excellent.

The opening closed entirely about the middle of November, and he is present this evening for your inspection.

Remarks: The present is by far the most extensive resection of the wall of the thorax that I have ever done. The first operation was practically preliminary, simply to gain access to the cavity of the pleura, and had to be terminated somewhat abruptly on account of the difficulty of the etherization. The second operation was attended with less difficulty from the anesthetic, and was fully carried out.

The operation which I made I have subsequently found has been described by Schede as a modification of Estlander's operation, or rather, perhaps, in suitable cases as a substitute for it. In the present case Estlander's operation would have been useless, on account of the immensely thickened pleura.

Schede makes a large, semi-circular flap, with its base at the second rib, its curve beginning on the front of the thorax and sweeping downward and backward in a large curve which includes the larger part of one-half of the thorax. In my own case, the soft parts were dissected from the ribs by a vertical incision with two horizontal incisions at the upper and lower ends of the first. It seemed to be equally satisfactory with that of Schede.

The ease with which the operation was done, and the admirable result, commend it to me very strongly. Nothing less radical would have effected a cure. The vessels were controlled without the slightest difficulty by hemostatic forceps, not even a single one requiring litigation.

The American Electro-Therapeutic Association will hold its fifth annual meeting at The College of Physicians and Surgeons, of Ontario, in Toronto, Canada, on Tuesday, Wednesday and Thursday, September 3, 4 and 5, 1895. Dr. Emil Heuel, secretary, 352 Willis avenue, New York City, U. S. A.

The Times and Register

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FRACTURE-TREATMENT.

The bone shafts and joints, by the action of the muscles, provide us with the machinery of locomotion, and other movements necessary in our existence.

Those bones which provide the greatest limits of leverages are most exposed to fracture in the event of injury; therefore, why this lesion is so commonly seen in the extremities. Until a comparatively recent period there was a general record of the fundamental principles, which should guide us in the management of the most current types of broken bones. But, in the immense move forward, along the whole line, in pathology and operative surgery, the tenets of fracture treatment formerly in vogue will not hold to-day, without certain modifications, and in some instances they must be excluded altogether.

We refer particularly to the immediate immobilization or adjustment, or what has been so ably of late championed by Championniere, of Paris—the practical discarding of splints in a large group of fracture of the extremities; and, we might add, the latest views, by our most progressive, and distinguished authorities, on the propriety of never in civil life, proceeding to an amputation, after a comminuted compound fracture unless the distal parts have been quite totally destroyed.

To any experienced surgeon in fracture treatment, many of the views promulgated by the eminent French surgeons, will be regarded as timely, though, perhaps, in some respects too radical. In all severe fractures near the joints, unattended with intractable displacements, there can be no doubt but the general custom of firm splinting is not only useless but harmful in many ways.

Massage, passive motion and douching are great aids in favoring reparative osteogenesis, hastening consolidation and overcoming the tendency to stiff, painful joints.

Indeed, the signs of the times rather point to reversion in the direction to some of the old-timed methods in simple fracture, which have not been improved on; the double inclined plane, the fracture-box, etc., the chief purposes of which were to steady the bones, without impeding the circulation.

The average general practitioner meets with so few fractures nowadays that do not find their way into hospital for treatment that he is scarcely prepared to deal successfully with the multiplicity of complications which fractures under various circumstances present. With him, then, it is well, both in the interest of his patient and for his own protection, that he always invite in some experienced neighboring practitioner in all serious fracture cases.

In the hands of the most competent, fractures sometimes do badly; fail to unite, are tardy of solidification or end with shortening; with those who only treat an occasional case conditions must commonly arise

during the course of repair, which, if not intelligently interpreted, or overlooked, are quite certain to tend to unsatisfactorily results and perhaps lead to inferences caculated to bode no good to the surgical attendant.

IODOFORM INJECTIONS IN JOINT DISEASE.

Ferraro (Il Policlinico, June 1) reports the case of a man, aged 37, who after a long walk first noticed pain in the right knee, which was uniformly enlarged, red and tender, and contained fluid. The joint was incised, and a considerable quantity of flaky pus let out. Two or three weeks after this, during which time the joint went on well, a small abscess formed in the upper third of the tibia; this was scraped. A similar purulent focus also appeared in the shaft of the tibia. The knee-joint became worse. The author then tried endo-articular injections of iodoform emulsion in sterilized glycerine (1-10) at intervals of twenty to twenty-five days. After each injection there was fever of maximum grade on the second or third day. The tubercle bacillus was found in the joint secretion. Slight improvement followed the injections, which were used five times, but, the patient not being satisfied, resection of the joint was finally done. It was then seen that the cavity was full of a mass of adipo-muco-fibrous connective tissue, the caseous substance being almost all gone, the osteitic foci cured or in process of cure, and the tuberculous nodules undergoing fibrous change. No bacilli were now to be found. Probably the idoform acts by exciting a reactive inflammatory process, with formation of new connective tissue.

DIPHTHERIA IN PARIS.

The Lyon Medicale is authority for the statement that during the week ending June 29, there was only one death from diphtheria in Paris. This is the smallest mortality since the mortality statistics of Paris have been published.

Book Reviews.

TWENTIETH CENTURY PRACTICE. AN INTERNATIONAL ENCYCLOPEDIA OF MODERN MEDICAL SCIENCE. By leading authorities of Europe and America. Edited by Thomas L. Stedman, M. D., New York City. In 20 Volumes. Volume III. Occupation Diseases, Drug Habits, and Poisons. New York: William Wood & Company. 1895.

The third volume of this great work treats of a variety of subjects, from Alcoholism to Mountain Sickness and from Osteomalacia to Sunstroke. The opening article is one on Alcoholism and Drug Habits, by one of the greatest living authorities on the subject, Dr. Norman Kerr, of London. This is not a mere extract from the author's well-known work on "Narcomania;" Dr. Kerr adopted the novel method of treating separately of the toxic effects of alcohol and other narcotics, and of the mania for intoxication, and his experiment has resulted in the production of perhaps the most readable and instructive essay on this vital subject that has ever been written. The second article is one on Shock, by Dr. George F. Shrady, editor of the Medical Record. This is written in the author's easy style. Seasickness is treated of by Medical Director Albert L. Gihon, of the United States Navy, than whom it would be difficult to find one better fitted by long experience to deal with this strangely obscure subject. Dr. Gihon also writes in this volume on Heat-stroke and Frost-bite, two subjects that would naturally fall within the personal ken of one who has passed more than a third of a century in the naval service in all quarters of the globe. Professor Councilman, of Harvard University, contributes a short, but valuable article on Osteomalacia. The subject of Toxicology is dealt with in two articles, one by Professor Beaumont Small, of Ottawa, and the other by Professor James Stewart, of Montreal. In

these articles only the important poisons are dealt with, those, namely, the effects of which the general practitioner may at any time be called upon to combat. The article on Diseases of Occupation, by Dr. James Hendrie Lloyd, of Philadelphia, is of unusual excellence, and stands out prominently as one of the best in this collection of masterpieces. The author has adopted the plan of classifying his subject according to the different influences that affect workers and professional men injuriously, thereby avoiding much needless repetition. By means of the excellent index at the end of the volume it is very easy to find what dangers beset those engaged in each occupation, as the different trades are there arranged alphabetically with references to the portion of the work in which their special diseases are dealt with.

TRANSACTIONS OF THE NEW YORK STATE MEDICAL ASSOCIATION. VOL. II., 1894.

This annual volume is always an attractive one from the many and valuable papers of the Association which are contained in it. This year it covers over 750 pages, among which are notable papers on Diphtheria; The Prevention of Tuberculosis; Abdominal Contusions (from the pen of Dr. Manley, of New York); Technique of the Cesarian Section; Ectopic Prynancy (by Dr. Ferguson, editor of the Transactions), and other interesting subjects.

PRACTICAL URANALYSIS AND URINARY DIAGNOSIS FOR PHYSICIANS AND STUDENTS. By Charles W. Purdy, M. D. The F. A. Davis Co., Phila., Publishers.

This work covers 349 pages and while in a sense a manual yet borders on the line of a text-book. The descriptions of normal and abnormal urinary constituents are accurately made, and the various tests scientifically indicated.

The second division of the work aims at Urinary Diagnosis, giving a concise description of the various pathological processes in progress in the economy whether local, general or surgical.

A useful appendix has been added bearing on Urinary examinations for life insurance, which in itself speaks well for the whole work. Every Medical Director of Insurance Companies ought to have one.

A GUIDE TO THE ASEPTIC TREATMENT OF WOUNDS. By Dr. C. Schimmelbusch, with a preface by Professor E. Von Bergmann. Translated from the second revised German edition by Frank J. Thornbury, M. D., with 43 illustrations. G. P. Putnam's Sons, New York, N. Y.

This work comprises 227 pages of detailed description regarding the best methods of rendering wounds aseptic. With a belief that the work might be of some service to American physicians, the translator has admirably done his part to make the book attractive and useful. The simplest surgical procedure—a catheterization or the administration of a hypodermic injection requires for the avoidance of danger an accurate understanding of the principles of asepsis as well as the major operations. It is the aim of this work to give this instruction and the subject is most admirably handled.

SYLLABUS OF ECLECTIC MATERIA-MEDICA AND THERAPEUTICS COMPILED FROM NOTES TAKEN FROM THE LECTURES OF FREDERICK J. LOCKE, M. D., CINCINNATI, O. By Harvey W. Felter, M. D. Published by M. Scudder's Sons, Cincinnati.

The demand for this work has grown out of the excellence of Professor Locke's lectures in the Eclectic Medical Institute, at Cincinnati and applies to the Materia-Medica of that system of medicine.

The work is compiled in the usual

way, beginning with an introductory chapter and running the routine course of emetics, cathartics, diaphosetics, diuretics, etc. Specific medication is treated and the work will be a great help to those who have attended and are attending the Eclectic School.

There are some 430 pages in this manual and the typography and binding are excellent.

ANNUAL REPORT OF THE SUPERVISING SURGEON GENERAL OF THE MARINE HOSPITAL SERVICE OF THE UNITED STATES FOR THE FISCAL YEAR 1893. VOLUME I AND II, Washington. Government Printing Office.

Medicine.

IN CHARGE OF

DR. E. W. BING, Chester, Pa.

SYMPTOMS OF LOCOMOTOR ATAXIA.

According to Professor Fournier, the first symptoms of locomotor ataxy may be classed as follows:—(1) Sign of Westphal; (2) sign of Romberg; (3) the "stairs" sign; (4) crossing of the legs; (5) walking at the word of command; (6) standing on one leg.

(1) Westphal's sign is well known; it consists in the abolition of the patellar tendon reflex, and is present in two-thirds of the cases.

(2) Romberg's sign can be thus appreciated: The eye is an indirect regulator of motion; it helps to correct deviations in walking and maintains the equilibrium. When a patient is suspected of incipient ataxy, it will often suffice to make him close his eyes when in an erect position to verify the diagnosis. In a few instances his body will oscillate, and if the malady is advanced he will be in danger of falling.

(3) "Stairs" symptom. One of the first and most constant symptoms of incipient locomotor ataxy is the difficulty with which patient will descend stairs. If questioned closely on the subject he will say that at the very outset of his malady he was always afraid of falling when coming down stairs.

(4) The manner in which a patient crosses his legs is often significant. In the normal state a man when performing that act lifts one leg simply to the height necessary to pass it over the other, whereas in the affection under consideration he lifts it much higher than necessary, describing a large segment of a circle.

(5) Walking at the word of command. The patient seated is told to get up and walk instantly. After rising he will hesitate, as if he wanted to find his equilibrium before starting off. If while in motion he is told to stop short, his body, obeying the impulsion, inclines forward as if about to salute, or, on the contrary, jerks himself backwards in order to resist the impulsion forward.

(6) The patient is asked to stand on one leg, at first with his eyes open, afterward closed. Although man is not made for this position, yet he can balance himself pretty firmly for a little while. The ataxic will experience a great deal of difficulty, and will instinctively call to his aid his other foot so as not to fall. If his eyes closed he will not be able to stand one instant, and if not held he would fall heavily to the ground. Such are the symptoms of incipient locomotor ataxy. They will not be all present frequently, but they should be all sought for in order to avoid an error which might have grave consequences.—Practitioner.

THE TREATMENT OF JAUNDICE.

Dr. M. Alivia, of Viterbo, read a paper before the International Congress on this subject, which concludes as follows:

1. Long-continued biliary stasis, comprising the secreting cells of the parenchyma of the liver and producing a certain anemia of the organ, markedly reduces and sometimes suppresses the secretion of the biliary acids. The gravity of the phenomena described under the name of

the biliary intoxication does not, therefore, depend upon the action of these acids.

2. The scarcity or absence of bile in the intestinal canal modifies very seriously the chemical processes there taking place.

3. One of the most common of the gastric changes in icterus is the suppression of hydrochloric acid secretion.

4. There is little or no loss of carbonate of sodium in these cases.

5. The reaction of the contents of the stomach is usually alkaline, less often neutral or faintly acid.

6. The physiological activity of the bile and of the pancreatic juice of the intestines is regarded.

7. The chlorides in the urine are increased, the reaction of the fluid is often alkaline, there is diminution of urea with an abundance of products of the aromatic series.

8. The more marked are these characters so much the more grave is the disease and its clinical manifestations.

9. Alkaline treatment does not modify these conditions. The effect of the acid treatment is, however, to diminish the chlorides to restore the normal acidity or urinary reaction, to increase the excretion of urea, and to reduce that of the aromatc products; at the same time there is a progressive increase in the weight of the body.—Calcutta Med. Reporter.

CREOSOTE CARBONATE AND GUIACOL CARBONATE IN PHTHISIS.

Dr. Weiss, in an article entitled "The Present Status of the Creosote Therapy of Tuberculosis" (Centralblatt fur die gesammte Therapie, 1894, No. III), says: "During my many years of service on the division of Professor Drasche in the General Hospital at Vienna, I had an opportunity to observe the creosote treatment in all its various forms. Since the introduction of the drug by Sommerbrodt the internal creosote treatment has been regularly employed side by side with the expectant treatment. In the year 1888-89 creosote injections were experimented with. The results were not published, as they were in no way noteworthy.

"Neither did the creosote clysmata and inunctions fulfill the hopes that were entertained of them; and we were relegated to the internal administration of the drug. Our observations did not entirely confirm the unfavorable observations of Stoerk. In the majority of cases the appetite and the weight increased, and the cough diminished, during the creosote treatment. When the creosote is not borne, Creosotal should undoubtedly be employed. Very considerable daily doses, 8 to 12 grammes (120 to 180 grains) pro die were well borne, and with the same happy result as with creosote. We employed it in capsules."

In the Prager Med. Wochenschrift, 1895, p. 11, under the heading "Progress of the Creosote Therapy," occurs the following:

"The literature of the last few years contains such favorable reports concerning the use of Creosote Carbonate and Guiacol Carbonate, that there cannot be the remotest doubt that they constitute an important improvement in the creosote treatment."

Dr. O. Torstensson, in an article on the "Use of Creosote Carbonate and Guiacol Carbonate in Phthisis," published in Eira, February 28, 1895, No. 4, Stockholm, Sweden, says:

"There is no chronic disease in the presence of which the country doctor of all others, is more helpless as regards treatment, than consumption. We have lost faith in cod liver oil; though if the recent discovery proves correct, that it energetically aids leucocytosis, we may take it up again; for we cannot doubt the importance of phagocytosis and the alexines in the tubercular process. Arsenic is a double edged sword, and can only be borne in the very beginning of the disease. Pilule terebinthine cum quinie may help the cough, but are otherwise useless. We then have recourse to Rose's chest drops and to our venerable Decoctum Pectorale. The first is a useful symptomatic remedy, and the latter a stomachic tonic that is often need-

ed. That is all there is to them. But how about creosote? Ah! well, that would be splendid, if we could give it in sufficiently large doses without ruining the digestion. Since it was first prepared in 1833, and introduced into practice by Reichenbach, it has been our most frequent weapon in our fight with the disase. But its use was lessened more and more in consequence of the above mentioned difficulty. In the year 1853, it was warmly recommended for phthisis by Bouchard and Gimpert; Sommerbrodt, with his extensive statistics, showed its practical value, and gave us the well-known formule for pills and capsules; and Fraenkel made it more bearable to the taste by his wine mixture. It has obtained a permanent position in the therapy of phthisis; but I believe that the doses employed are too small to be of any great value. In larger doses we find, at all events here, that it ruins the digestive organs of our consumptives, weak enough as they usually are without the disturbing influence of the drug. So thoroughly have I felt this that during the last eight or ten years I have not used it per os at all, but have contented myself with giving it mixed with flour soup, as a rectal injection. In this form it can be used for months in doses of one to two grammes (15 to 30 grains) given once or twice daily. It does not irritate the intestinal mucose, or cause any other trouble. That it soon reaches the circulation when administered in this way is shown by the rise of temperature, often to one degree, as well as the changes in the urine very soon thereafter. Nor that I have found any albumen, or other pathological products in the urinary secretion after the use of creosote; I refer only to the temporary darkening of its color. I have also attempted to use a quillaya infusion; but colic and other troubles soon caused me to give up its use.

"Thus the field of efficacy of the creosote has not been a large one. I was therefore greatly pleased to learn about a year ago through the German medical press that two preparations of creosote had been obtained which, whilst retaining all the good properties of the drug, were free from the above mentioned disadvantages. They are the Creosote and the Guiacol Carbonates. Guiacol is the chief efficacious component of creosote; I have used it subcutaneously for several years (see my article in Eira, No. 223, 1893); but it is only during the last year that I have had an opportunity to use its Carbonate on a larger scale through the kindness of its manufacturer, Dr. F. von Heyden, of Radebeul, who placed a considerable amount at my disposal. It is a white powder, tasteless and odorless, and containing 90.5 per cent. of pure guiacol combined with carbonic acid. It is entirely different to the mucosa of the intestines, and rapidly enters the circulation; so that the guiacol reaction can be obtained in the urine half an hour after its ingestion. Now since guiacol leaves the body as an etherial sulphuric acid salt, it is very probable that its beneficial action in bacillary phthisis is due to its union with the sulphur of the blood albumen, and especially with those poisonous modifications of it, the products of the life action of the bacilli, the toxins. This combination is again split up by the oxygen in the blood, and so excreted. The body, relieved of these noxious elements, gains new strength, and is enabled by means of the leucocytes to destroy the producers of these noxious compounds, the tubercle bacilli.

"This explanation, which is based on that of a prominent English physician, contains nothing that is opposed to the newer bacteriology and pathology of phthisis.

"I have seen the general condition improve in several cases of phthisis of the first and second grades after a few weeks use of the drug in doses of one to two grammes (15 to 30 grains) given twice daily after eating. Naturally, the other means employed for the successful treatment of consumption were not neglected. The body weight increased, and the local symptoms in the lungs diminished in extent and in severity. Frequently I have employed several different methods of exhibiting the drug

in the same case. More especially I have employed guaiacolic acid or antiphthisin in injections, and most often in combination with rectal injections of creosote carbonate which I obtained from the above mentioned firm for experimental purposes. This carbonate is a fluid that nearly resembles the ordinary creosote in appearance, but is almost free from odor and taste. It can be given internally, undiluted, in teaspoonful doses, without causing any gastric trouble at all. As might be expected, I have not found any especial difference between this carbonate and that of guaiacol. I hope that both preparations will entirely displace the ordinary creosote treatment."

TREATMENT OF CHOLOLITHIASIS.

Blum (Munchener medicinische Wochenschrift, March 19, 1895) draws attention to the value of large olive-oil injections in the treatment of biliary colic. These rectal injections can be substituted for the large doses of olive oil given by the mouth, to whch patients often object, and which may disturb the functions of the stomach. In addition to the probable cholagogue action of these injections, olive oil has a slight laxative action. The author follows Fleiner's directions in giving these large enemata: 400 to 500 cubic centimetres of pure warm oil are introduced, at first daily, and subsequently at longer intervals. The author gives details of five cases treated with benefit in this way.—University Med. Mag.

DIGESTIBILITY OF STERILIZED MILK.

Bendix (Fahrbuch fur Kinderheilkunde) has made researches upon sound and sick children as to the digestibility of both sterilized and non-sterilized milk. He concludes:

1. That in healthy children there is no difference as to the digestibility of the two milks.

2. In sick children the sterilized is digested just as well as the unsterilized, notwithstanding the fact that the absorption of fat and nitrogen is so much reduced in such children.

3. The taste and smell of milk, while they may be changed by sterilization, are not materially so, and sterilized milk is readily taken by children.

4. He has never seen the health of children badly affected by the use of sterilized milk. On the other hand, they eat well, grow, and their stools are normal, and they never have vomiting.

5. The transmission of severe diseases from animals to men is prevented by the sterilization of milk.

6. Sterilization is much preferable to Pasteurization, and heating the milk to 212 degrees F., while it does not hinder its digestion, absolutely kills all bacteria and spores.—Calcutta Mer. Reporter.

Gynecology and Obstetrics.

RETRO-DISPLACEMENT OF THE UTERUS.

Malpositions of the uterus are difficult to treat and require skill and patience. Dr. Alfred C. Carpenter, in speaking of retro-displacements of that organ advises never to attempt to replace a retro-displaced uterus with the patient on the back.

If the pessary fails, the operation of hysterorrhaphy may yield good results. Another method is that of shortening the round ligaments. A third method is called by Dr. A. P. Dudley, of New York, desmopycnosis. The objects attained by this operation are three-fold:

1. It shortens the round ligaments without sacrificing any of them, sufficiently to hold the uterus in a position anterior to the perpendicular line of the body, by simply changing their point of uterine attachment and including with them the anterior fold of the broad ligament, across which the round ligament passes to reach the inguinal canal.

2. Denuding and firmly fastening

the round ligaments to the anterior surface of the uterus thickens and gives extra support to the latter.

3. By this procedure you succeed in maintaining the uterus in a normal position without fastening any portion of it to the anterior abdominal wall.

Dudley claims the following advantages for this method over either hysterorrhaphy or the Alexander operation:

1. It corrects the displacement by utilizing the natural supports of the uterus without sacrificing any of them.

2. The proper diaphragmatic action of the pelvic floor is not interfered with.

3. The bladder is not imprisoned in the least and its proper action is undisturbed.

4. There is no chance for intestinal adhesions about the line of sutures, for the latter lie in apposition to the posterior surface of the bladder, and adhesions taking place at this point simply elongate the utero-vesical junction.

5. In case of impregnation the uterus is free to rise in the abdominal cavity.

6. The use of catgut as a suture material in the operation does away with the dangers of the formation of sinuses by the ligature.—Am. Jour. Obstetrics.

A CONTRIBUTION TO TUBERCULAR DISEASE OF THE UTERUS

Amanuel (Zeitschrift fur Geburtshulfe und Gynakologie, Bd. XXIX) emphasizes the advantages of careful microscopial examination of all tumors and inflammatory processes of the genital organs, and as a proof of its importance he reports the case of a woman, 50 years of age. Vaginal examination—The perineum was found covered by a sloughing ulcer, four inches in length and three-quarters of an inch in breadth. A tumor the size of an apple was attached to the cervix, causing secondary ulceration of the surrounding vagina. The uterus was considerably enlarged and anteflexed. There was some tenderness in both ovarian regions. The ulcer of the perineum was excised, also a portion of the tumor, and subjected to microscopical examination. They were both proven to be tubercular. At this time there were no physical signs of pulmonary involvement. The uterus, tubes and ovaries, the diseased portion of the vagina, and an enlarged lymph-gland were removed by the vagino-abdominal method. The patient died in shock. The cause of death, proven post-mortem, was fatty metamorphosis of the heart-muscle. The spleen, liver, kidneys and peritoneum were found infiltrated with miliary tubercles. The adnexa and lungs were healthy. The endometrium was completely destroyed by the tubercular disease, and the uterine cavity was filled with caseous material. The writer here describes in detail the characteristic microscopical lesions of tuberculosis found in the sections made through the uterus, vagina and perineum. That the disease was tubercular is beyond doubt. He further writes that tuberculosis of the uterus has rarely been described, since he believes the cases are taken for malignant disease, removed, and no microscopical examination made. The primary lesion in the above case must have been in the cervix uteri; the vagina, uterine cavity, and perineum being secondarily infected. Only two cases similar to this one have been reported. The infection of the female genital tract can take place through coitus: secondarily, by metastasis by way of the blood vessels; and most frequently from the lungs and from general tuberculosis of the peritoneum. In this case, only the peritoneum covering the tubes was infiltrated with miliary tubercles.—University Med. Mag.

TRANSVERSE POSITIONS OF THE HEAD AT THE OUTLET OF THE PELVIS.

Maurice Muret (Revue Medicine de la Suisse Romain, XIV, No. 1, 1894) considers an etiological division into

primary, secondary and mixed cases.

Primary transverse position at the outlet occurs in the simple flat pelvis, both non-rachitic, and the rachitic pelvis that has taken this form, in double congenital dislocation of the hips, and in the contracted flat pelvis. In simple flat pelvis sinciput is lower, while in the contracted flat pelvis, the head being more strongly flexed, the occiput is lower. Furthermore, the position occurs in the funnel-shaped pelvis and in the larger pelvis when a small head following a sudden rupture of the membranes is rapidly driven through the pelvis.

Secondary transverse position at the outlet occurs where heads are large, with wide occiput, which remains posteriorly in the passage through the pelvis. During the rotation at the outlet if the pains give out, the above position, which is transitional, results. The anterior fontanelle is usually lower.

The mixed form occurs in flat pelvis large enough to allow the head to pass the inlet in an oblique diameter with the occiput posteriorly, but where, at the outlet, the contraction prevents a complete rotation of the occiput to the front. The results of this position are different. The pains may cease, or, in spite of a strong pain, the head may remain impacted in the pelvic outlet. Sloughing of portions of vagina and fistulae may result. The child may die. With powerful pains the head may be driven through the bony outlet and stop on the muscular pelvic floor. Very rarely the delivery may be spontaneous in the transverse position, especially in cases of large pelves with small heads and old perineal tears. Even in the contracted flat pelvis the head, if strongly flexed, may be born in the transverse position. If rotation occurs in the outlet it is usually rapid, rarely slow, occasionally the occiput rotates posteriorly; or, the rotation may occur without the pelvic outlet in the soft parts.

In the diagnosis, accurate pelvic measurement is important. The majority of the primary cases were, in his experience, occipito-anterior presentations; of the secondary cases, occipito-posterior.

The diagnosis from the position of the fontanelles is often made difficult by the large caput succedaneum; occasionally an ear may be easily felt behind the symphysis. The prognosis for mother and child is in general not unfavorable. A long labor, especially in the primary cases, in dangerous.

Treatment, at first expectant. The woman is placed upon the side towards which the occiput points. If the labor does not progress, an effort is made to rotate the head, with two fingers passed up behind the ear lying behind the symphysis, according to Tarnier. This is useless in cases of contracted pelvis. If forceps become necessary Muret advises the oblique application, but not to attempt rotation with the forceps; when the head has reached the muscular pelvic floor the forceps is removed. Then rotation can be effected by means of two fingers upon the smaller fontanelle, while two fingers introduced into the rectum press the forehead posteriorly. In the cases of funnel-shaped and contracted flat pelvis, if the child is living, symphyseotomy may be preferred. If the child is dead, craniotomy.—University Med. Mag.

THE EFFEST OF OVARIOTOMY UPON THE VOICE.

The well-known effect of castration in young males in heightening the pitch of the voice has lead Dr. J. Moure to investigate the effect of ovariotomy upon the voice. His observations in two cases of ovariotomy in young women showed an effect exactly the opposite of that of castration in men, since the voice became deeper and harsher, and the patients thought they were hoarse. The higher notes were lost and the voice fell from soprano to mezzo-soprano. This small number of observations is obviously entirely insufficient to establish a fact; and as no previous cases are on record of the production of any changes in the voice by ovariotomy the observations must await confirmation from further cases.—Boston M. and S. Jour.

Miscellany.

A NEW THEORY OF SLEEP.

Since the discoveries made by Golgi, Cajal, Retzius and others of the peculiar anatomical characteristics of the nerve-cells a number of new theories regarding brain-function and brain-action have been in the field. The nerve-cell, as it is now understood, consists of a very large number of long branched processes, which are called the protoplasmic processes, and a single axis cylinder which extends out, becoming eventually the nerve-fibre and giving off fine lateral branches. It has also been shown that each nerve-cell in the brain is in contiguity with some other nerve-cell, or rather with the terminals of the axis-cylinder process of that cell, but that no actual union takes place between the processes from the one cell and fibre process of the other. When one set of nerve-cells, for example, are thrown into activity, impulses are sent out along the axis cylinders and their terminal end-brushes, and these affect by contact the protoplasmic processes of other cells. Cajal and other look upon the axis cylinder and nerve-fibre as conveying impulses out from the nerve-cell or body, while the protoplasmic processes receive impulses brought to them and carry them to the cell-body. These latter, therefore, are sometimes called cellulipetal, while the axis-cylinder process is called cellulifugal. We are speaking, of course, now of the relations of the different groups of cells in different parts of the brain, rather than of the relations of these cells to the spinal cord and parts below. Some time ago Professor Duval proposed the theory of sleep based upon the peculiar relations of the brain-cells and fibres. According to this theory the nerve-cells in repose retracted their processes, which, as he thought, were really pseudopods. The cell processes being thus retracted, the contiguity of the cell with other cells was less perfect, hence their functions became lowered, consciousness was lost, and sleep ensued. Kolliker objected to this view, on the ground that amoeboid movements are never observed in nerve-cells, at least of the higher animals; Duval having contended that he had seen such movements in the lower order of animals. Cajal, siding with Kolliker, states that no matter what way you kill an animal—by shock, strangulation, or anaesthesia—the nerve-cells never differ in aspect, and one never can discover any amoeboid movements among them, even when they are placed freshly in the field of the microscope. Cajal has, however, suggested another theory of sleep which he believes more rational and more in accordance with facts. While nerve-cells do not have amoeboid movements, there are, scattered richly throughout the brain-tissues, other cells known as neuroglia cells. These are cells with very numerous fine processes, and they form in a large measure the supporting framework of the brain-tissue, sending their fine processes in among the nerve-cells and blood-vessels. Now Cajal's theory is that these neuroglia cells during repose extend or relax their fine hair-like processes. As the result of this the perfect contact between the processes of the nerve-cells and the end-brushes from the axis cylinders that surround them is interferred with, hence the brain function is slowed up and sleep ensues. During activity these neuroglia cells retract their numberless fine processes, the contact between the nerve-cells becomes perfect again, and mental functions are resumed. The practical facts upon which Cajal bases this ingenious theory are that the neuroglia cells are found to be in different states. In some their processes are retracted and shrivelled and in others they are extended. There is unquestionably an amoeboid movement, therefore in this class of cells. Furthermore, it is in accordance, he says, with physiological facts that a cell would retract its processes during activity and re-relax them during repose. The physical basis of sleep, therefore, accord-

ing to this view, would be the bristling up of the hair-like processes of the neuroglia cells, a squeezing of them in between the machinery by which the nerve impulses pass, and a sort of a clogging of the physical mechanism.

Such theories are of course as yet only theories, and may be regarded by practical minds with great contempt. Still, there is sometimes an advantage in scientific hypotheses, even if they furnish only an intellectual exercise to the student.—Ed. Med. Record, Aug. 3, 1895.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Preliminary programme of the Detroit meeting of the Mississippi Valley Medical Association, September 3, 4, 5 and 6, 1895.

Aldrich, Charles J., Cleveland, "Prognosiss in Syphilitic Dseases of the Nervous System.

Aulde, John, Philadelphia, "The Abortive Treatment of Typhoid Fever."

Babcock, Robert H., Chicago, Title unannounced.

Ball, James M., St. Louis, "Ripening of Cataract."

Barclay, William F., Pittsburg, "Legitimate Pharmacy."

Belfield, William T., Chicago, "Asepsis in Bladder and Prostate Operations."

Bernays, A. C., St. Louis, "The Results and Conclusions Derived from an Experience of One Hundred and Sixty-five Appendicectomies."

Buchman, A. P., Ft. Wayne, Ind., "Psychology in Medicine."

Bulson, A. E., Jr., Ft. Wayne, Ind., "Toxic Amblyopia due to the Excessive Use of Tobacco."

Cale, George W., St. Louis, "Two Successful Operations for Insanity, with Remarks."

Church, Archibald, Chicago, "A Neurotic Form of Wry Neck."

Cline, L. C., Indianapolis, "Laryngitis from a Rhinological Standpoint."

Cole, Carter S., New York City, "Ulcers of the Leg; All can be Cured."

Cordier, A. H., Kansas City, "Technique of Abdominal Hysterectomy."

Cutter, Ephraim, New York City, "The American Diagnosis and Treatment of Fatty Degeneration and its Masquerades."

Dench, Edward B., New York City, "The Treatment of Acute Inflammation of the Middle Ear and Mastoid Process."

Drennen, C. Travis, Hot Springs, Ark., "Syphilis and its Treatment."

Duff, John Milton, Pittsburg, "The Ordinary Duties of the Obstetrician."

Forshay, P. M., Cleveland, "Pyelitis; with Report of a Case."

Fuller, Eugene, New York City, Title unannounced.

Galloway, William A., Xenia, O.,

Gilliam, D. Tod, Columbus, "Uterine Fibroids; when to Operate."

Heath, F. C., Indianapolis, "Some Sequels of Grippe."

Heddens, J. W., St. Joseph, Mo., "Radical Cure of Hernia."

Heflebower, Robert C., Cincinnati, "Excision of the Auditory Ossicles."

Holmes, Bayard, Chicago, "Puerperal Sepsis; When is Hysterectomy Indicated?"

Hughes, C. H., St. Louis, "Spot Specialism."

Jenks, Edward F., Detroit, Title unannounced.

Lanphear, Emory, St. Louis, "Trephining the Spine for Pott's Disease; with Report of Eight Cases."

Lash, H. M., Indianapolis, "Vertigo; with Report of a Labrinthine Case."

Lewis, Bransford, St. Louis, "The Removal of Persistent Nodules after Epididymitis."

Link, J. E., Terre Haute, Ind., "Fracture of the Femur."

Love, I. N., St. Louis, "The Bicycle from a Medical Standpoint."

McGraw, Theodore A., Detroit, "Annual address on Surgery."

Maass, F., Detroit, "The Comparative Value of Medical and Surgical Treatment of Appenditis."

Matthews, J. M., Louisville, Title unannounced.

Murphy, J. B., Chicago, "Peritonitis."

Norbury, Frank P., St. Louis, "Medico-Legal Consideration of Hysteria."

Pantzer, H. O., Indianapolis, "Post Climacteric Hemorrhages."

Pepper, William, Philadelphia, "Annual Address on Medicine."

Peterson, Frederick, New York City, "The Anomalies of the Ear Degenerates."

Pope, Curran, Louisville, title unannounced

Porter, Miles F., Ft. Wayne, Ind., "Coelitotomy in Purulent Peritonitis; with Report of Case."

Porter, William, New York City, title unannounced.

Price, Joseph, Philadelphia, "The Relations of the Trendelenburg Position."

Ricketts, B. Merrill, Cincinnati, (a), "The Skin Diseases Amenable to Galvanism;" (b) "Local Anesthesia by Faradism."

Summers, Thomas O., St. Louis, title unannounced.

Stillson, J. O., Indianapolis, "Complication in Cataract Arising from Diabetes, Albumenuria, etc."

Straus, Leon, St. Louis, title unannounced.

Taylor, J. H., Indianapolis, "How Shall We Rear Our Babies?"

Thornbury, Frank J., Buffalo, "Auto-Intoxications."

Weber, W. C., Cleveland, title unannounced.

Wells, Edward F., Chicago, "Pulmonary Tuberculosis; its Early Diagnosis."

Wheelock, K. K., Ft. Wayne, Ind., "Rheumatism in its Relation to the Eye."

Wishard, W. N., Indianapolis, President's address.

Woodbridge, John Eliot, Youngstown, O., title unannounced.

Wyeth, John A., New York City, title unannounced.

Zinke, E. Gustave, Cincinnati, title unannounced.

F. C. Woodburn, Secretary.

MEDICO-LEGAL CONGRESS—SUMMER VACATION OF 1895—PRELIMINARY ANNOUNCEMENT.

The Medico-Legal Society announces a Medico-Legal Congress at or near the City of New York on the 4th, 5th and 6th of September, 1895 (place to be hereafter announced), open to all students of Medical Jurisprudence, under the charge of a committee of arrangements.

The following titles of papers are already received and announced:

1. PSYCHOLOGY AND PSYCHOLOGICAL MEDICINE:

(a) Insanity and Mental Medicine—Forbes Winslow, M. D., London, chairman.

W. B. Fletcher, M. D., Indianapolis, "What Constitutes Unsoundness of Mind."

Frank P. Norbury, M. D., Jacksonville, Ill., "The Mental Symptoms of Premature Sexual Decay."

James R. Cocke, M. D., Boston, Mass., "Latent Hysteria as a Cause of Temporary Mental Disease."

Professor C. H. Hughes, M. D., St Louis, Mo., "Paranoia."

Wm. F. Drewry, M. D., Petersburg, Va., "Simulation of Insanity. A Medico-Legal Study."

G. E. Shuttleworth, M. D., Richmond, England, "Legal Responsibility in Idiotic and Feeble-Minded Persons"

(b) Inebriety—T. D. Crothers, M. D., chairman.

Norman Kerr, M. D., London, "What shall we do with the Alcoholic Inebriate, Apparently Insane."

Lewis Mason, M. D., Brooklyn, N. Y., "Questions of Responsibility in Alcoholic Coma, found on the Street."

Isaac N. Quimby, M. D., Jersey City, N. J., "Alcoholic Anesthesia a Factor in Crime."

E. C. Mann, M. D., N. Y., "Inebriety and the Opium Habit in their Relation to Testamentary Capacity."

T. D. Crothers, M. D., "Legal Responsibility in Inebriety."

(c) Sociology and Criminology—Hon. Moritz Ellinger, chairman.

Forbes Winslow, M. D., London, "Suicide Considered as a Mental Epidemic."

Gustave Boehm, Esq., New York City, "Suicide and the Right to Commit it." "Prostitution—The Evil; The Cure; Legislation, etc."

Dan'l R. Brower, M. D., 597 Jackson Boulevard, Chicago, Ill., "Crimi-

nality a Disease; its Etioligy and Treatment."

Dr. Havelock Ellis, M. D., London, "Sexual Inversion, with Analysis of 36 New Cases.'"

Professor Elliott Coues, Washington, D. C., "The Megalomania of H. P. Blavalsky a Study of Criminal Alienism."

F. L. Hoffman, Esq., Newark, N. J., "Medico-Legal Aspects of Child Insurance."

Wm. Lee Howard, M. D., Baltimore, Md., "Sexual Perversion and Crime."

Moritz Ellinger, Esq., "Sociology and Criminology, Growths of Modern Civilization." "The Case of Czynski."

(d) Experimental Psychology—Prof. W. X. Sudduth, of Chicago, chairman.

Professor W. X. Sudduth, late Dean of the University of Minnesota, Minneapolis, now Chicago, Ill., "Hypnotism and Crime."

Clark Bell, Esq., New York City, "Hypnotism in the Courts of Law."

Professor Edwin Checkley, New York, "Telepathy."

2. MEDICO-LEGAL SURGERY—Granville P. Conn., M. D., Chairman.

Professor A. M. Phelps, New York, "Duties of the Railway Surgeon to the Corporation, to the People, and to Himself."

W. B. Otten, M. D., Chief Surgeon M. P. R'y Co., St. Louis, Mo., "Mental States of Railway Employes." "Tuberculosis in Legal Medicine."

3. MEDICAL JURISPRUDENCE AND MISCELLANEOUS.—Judge A. H. Dailey, Chairman:

Mary Weeks Burnett, M. D., Chicago, Ill., "The Relation of Occult Medicine to Law."

Austin Abbott, LL. D., "Necessity of Medical Supervision for Criminal Arrests."

Fred C. Valentine, M. D., "When should Gonorrhoeal Patients be Allowed to Marry?"

J. N. Hall, M. D., Denver, Col., "Gun Shot Wounds."

J. C. MacGuire, M. D., "Physician's Relation to his Client, and Obligations as a Citizen of the State."

Eliza Archard Connor, N. Y., "Woman in the Light of Law and Medicine."

Jennie Stanton Wilcox, M. D., Saratoga Springs, N. Y., "Woman in the Legal Profession, and its Relation to Medical Jurisprudence."

Kate E. Hogan, LL. B., Counselor-at-Law, N. Y., "The Legal Evolution of Woman."

Hon. C. H. Blackburn, Cincinnati, ., "What are We?"

4. CHEMISTRY.—PROF. H. A. MOTT, LL. D., Chairman:

Professor Peter Townsend Austin, "Relation between Chemical Constitution and Physiological Action."

Professor H. A. Mott, New York. "Somatic Death by Poison."

5. BACTERIOLOGY:

Paul Gibier, M. D., "What may be the Part of Bacteriology in Forensic Medicine."

Clark Bell, Esq., Secretary.

The Eye and Ear Hospital of Pittsburg, Pa., opened its doors to patients July 1, 1895.

The managers secured the large and commodious building No. 945 Penn avenue, which has been thoroughly fitted for the care of patients requiring hospital treatment.

Private rooms have been prepared for those patients who are able to pay for their accommodation, and bright and cheerful wards for the worthy poor.

The Executive Surgeons will be in attendance at the Hospital daily.

The Hospital Dispensary will be open (to the poor only) from 3 to 4 P. M. daily (Sunday excepted.)

HOW DO PLANTS OBTAIN THEIR NITROGEN?

Not the least remarkable part of the knowledge that we have gained during the last few years has been our insight into the life process of plants, especially as regards their manner of assimilating nitrogen, admirably summed up by Professor H. Marshall Ward, F. R., in the current number of Science Progress.

The mere narration of the details of the struggle with nature for the possession of this momentous secret is as exciting as the record of the discovery of the Northwest Passage. After Sachs had determined the function of chlorophyll in splitting up the carbonic acid of the air into carbon and oxygen by means of the sun's radial energy, the question of the supply of nitrogen to plants came into prominence. As the leaves of the plant are bathed in an atmosphere of nitrogen, it was supposed first of all that the nitrogen was obtained from the air, but a crucial experiment of Lawes and Gilbert with different varieties of agricultural plants seemed to disprove this. The experiments, indeed, made it perfectly clear that a green plant was unable of its own accord to fix the nitrogen of the air. The only other sources of nitrogen are the nitrates derived from animal excretions, the decompositon of animal and vegetable tissues, and the nitric and nitrous acids produced by electrical discharges in the atmosphere. Nitrates are exceedingly soluble in water and are rapidly removed from the land by surface drainage, so that these sources seem hardly sufficient to account for all the nitrogen used by the vegetable world. In this dilemma a fresh path was opened to the investigators by the progress of bacteriology on the one hand, and of researches into the functions of the roots and root hairs on the other. In a thimbleful of soil there are present from one to ten millions of minute organisms in more or less close contact with the rootlets of the plant. The mode of life of these bacteroids in relation to the plant was a fertile subject for investigation. There are present, of course, a certain number of merely destructive organisms, and a further cohort of nitrifying and de-nitrifying germs, but what of the others? Their function was not fully understood until 1887, when Professor Marshall Ward found that the soil contained a perfectly definite living organism that invades the tissues of leguminous plants, causing fleshy nodules to form on the rootlets. Further investigations by a number of observers since that time have elucidated the curious relations that exist between the plant and the bacteria of the soil. It appears that the organism, having entered the root hairs, stimulates the deep cells of the cortical tissues to form a layer of hypertrophied cells. These cells are filled as fast as they are formed with quantities of bacteria, which do not injure the cells, but stimulate them to intense physiological action. During this time large quantities of carbohydrates are taken from the plant and converted into carbonic acid, the energy thus obtained being used to do the necessary chemical work in splitting up the nitrogen molecules obtained from the sorrounding air and compelling them to enter into combination. When the activity ceases the partially disorganized contents of the nodule are absorbed by the plant, the shell, together with a few bacteroids that have escaped destruction, being rejected as debris. Leguminous plants seem to be the only ones capable of fixing nitrogen with the assistance of the bacteria of the soil, and a crop of peas or beans adds remarkably to the fertility of a field, so that by a proper succession of crops the farmer will be enabled to dispense to a lage extent with nitrogenous manures. By the application of our growing scientific knowledge to practical agriculture there is no reason why our fields should not yield many times their present stores of food to supply the needs of our population and make it worth while again to grow English corn to feed English mouths.—Lancet.

EXCISION OF THE VAS DEFERENS FOR PROSTATIC HYPERTROPHY.

Pavone (Il Policlinico, June, 1895) has made a series of experiments upon dogs with regard to the effects of removing the testes or vas alone. He finds that bilateral extirpation of the vas brings about the same atrophy of the prostate as castration. Drawings were made from the sections of each operation, and when

compared the changes were found to be the same. The author, therefore, recommends the excision of the vas in reference to castration, being a much simpler operation, causing less mutilation and less mental shock to the patient.—University Med. Mag.

TREATMENT OF CYSTITIS.

Frendenberg (Wien. klin. Woch., June 6, 1895) has tried cantharidon in 56 cases of cystitis. The formula used was cantharidin (Merck's) 0001 (—1 mg.), alchohol ad solvend. .1.0; aq. destill. ad 100. A teaspoonful of this was given three or four times a day; larger does did not succeed if this failed. Results: (1) In five cases no improvement; of these only one was afterwards cured by local treatment after trying other drugs; the other four resisted even operative treatment (cases of vesical tuberculosis, contracted fibrous bladder, etc.). (2) In 19 its action was slight, or even doubtful, the strangury alone being improved, or the urine clearing without the cure being complete. In one of these the cystitis was due to perforating silk sutures after laparotomy, and the strangury was alone improved; in another the bladder had diverticula; some remained, however, in which the drug failed without apparent cause; for example, in one case of gonorrheal cystitis afterwards cured by sandal wood oil. (3) The remaining 32 cases were completely cured, often surprisingly quickly. In three cases of gonorrheal cystitis cantharidin succeeded where sandal wood oil failed. Conclusions: (1) Cantharidin is approached only by sandal wood oil in its action in cystitis, and the latter is to be prefered if urethritis is present. (2) Its advantages are its cheapness, tastelessness, and almost complete freedom from unpleasant symptoms, at least in the above given doses, frequent erections being noticed only once (after use for ten days), formication once, and a morbilliform eruption once. Disordered digestion or albuminuria never occurred.

A SUBSTITUTE FOR EXECUTION BY ELECTRICITY.

An Ohio physician proposes that the death penalty be carried out by filling the room in which the condemned man is sleeping with carbonic-acid gas.

A CASE OF INCARCERATED HERNIA AND ITS REDUCTION BY RECTAL TAXIS.

Brown (Medical News, May 4, 1895) gives the case of a child, aged 2 months, suffering from strangulated hernia in the right inguinal region. He attempted reduction by inversion of the child and taxis under chloroform. Although this was continued for half an hour, it failed. The index finger of the right hand was then introduced into the rectum, and while steady pressure was made on the mass from without with the left hand, with the finger in the bowel he pushed the portion of the mass presenting through the abdominal opening from side to side in every direction.

By this means the mass was finally moved slowly back through the opening, and finally dropped into the abdomen. The tip of the finger could then be inserted into the internal opening. He suggests that in adults, if the surgeon possess a small hand, it may be introduced into the rectum and traction made with the finger and thumb on that portion of the tumor just within the abdominal ring.

RADICAL CURE OF HERNIA.

Beresowsky (Zeitschrift fur Chirurgie, 1895) gives an elaborate report of the operations for the radical cure of hernia as performed by Kocher in the Berne clinic. He submits the following conclusions:

(1) That in view of the absolute lack of mortality, and only a small percentage of return, the expressed wish of the patient is a sufficient indication for operating.

(2) That the size and duration of the hernia decreases the chances of

success, both as regards healing and freedom from return.

(3) The age of the patient has but little influence on healing, and only increases the probability of a return of the hernia.

(4) In children the wound should be as hermetically sealed as possible, the sutures being placed close together, and no drainage used. Collodion dressing is to be applied.

(5) Kocher's method gives results in no way inferior to those of Macewen and Bassini, and by being much simpler is less liable to disturbance in healing.

(6) Enlargement of the veins should be treated by their removal.

(7) The subsequent use of a truss is regarded as unnecessary.

THE BEST TREATMENT IN HEART DISEASE.

Robert H. Babcock, of Chicago, Ill. (The Journal of the American Medical Association), concludes an able paper on the above subject as follows:

1. The position taken by Fraentzel, that rest is injurious in the treatment of all forms of heart disease is untenable, and the reasons he assigns are incorrect. Prolonged rest is detrimental, undoubtedly, in cases of enlargement of the heart, without valvular disease, partly if secondary to arterio-sclerosis, and in cases of fatty or other degeneration of the cardiac muscles.

2. The cause, however, lies in the circulation outside of the heart and not, as stated by Fraentzel, in the liability of cardiac, like striped voluntary muscle, to degenerate as a result of prolonged inaction, since the heart muscle cannot during life be subjected to complete repose.

3. When compensation has become destroyed in valvular lesions of the heart, particularly mitral stenosis and aortic incompetence, rest is indicated theoretically and is beneficial in practice.

4. Brachycardia would theoretically contra-indicate prolonged rest.

5. On the other hand, it is called for in paroxysmal tachycardia, but should not be maintained, after having shown its powerlessness to affect the heart rate.

6. Acute inflammatory or degenerative affections of the heart indicate rigid rest in the recumbent position.

Prescriptions.

CHANCRE.

The following are various applications recommended by different authors:

R.—Cupri subaceta,
Hydrarg. chlor. mit.....aa 10 gr
M. Sig.—Dust over sore.—Ellis.

R.—Ol. lavand .....20 min.
Iodoformi,
Lycopodii .....aa 2 dr.
M. Sig.—Dust on part and cover with lint.

R.—Hydrarg. chlor. mit.....8 gr.
Liq. calcis.....2 oz.
M. Sig.—Shake and use as a wash (Black wash).

R.—Hydrarg. chlor. corros.....4 gr.
Liq. calcis.....2 oz.
M. Sig.—Shake and use as a wash. (Yellow Wash.)

R.—Hydrogen peroxide.....1 oz.
Sig.—Use as a wash and apply on lint. If too strong, may be diluted. —Ringer.

R.—Hydrarg. chlor. mit.....ss. oz.
Sig.—Dust on and cover with dry lint.—Van Buren and Keyes.

CHANCROID.

The following methods of local treatment have been advised:
Actual cautery and dress antiseptically.

R.—Acidi sulphurici,
Pulv. carbonic ligni.....aa ½ dr.
M. Q. s. ft. magna.
Sig.—Dry the sore and apply thoroughly by means of a wooden spatula. Allow artificial eschar thus formed to separate spontaneously, using no dressing.—Ricord.

R.—Iodoform .....2 dr.
Ol. menth. pip. .....10 min.
M. Sig.—Dust on sore and cover with moist lint.

R.—Bismuth, subiodid .....2 dr.
Sig.—Dust on sore and cover with dry lint.—Chassaignac.

R.—Pulv. acidi salicylici.....2 dr.
Sig.—Dust on sore and cover with dry lint.—Anglada.
Cauterize with nitric acid, protecting the surrounding parts by oil.

R.—Succi limonis.....1½ dr.
Vini opii.....45 min.
Liq. plumbi subacetat.....1 dr.
Aq. destillat.....5 dr.
M. Sig.—Soak pledgets of lint in the solution and apply locally. (In phagedenic form.)—Rodet.
—Quarterly Atlas of Dermatology.

The Times and Register.

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Original.

TREATMENT OF ASIATIC CHOLERA.*

BY ELMER LEE, A. M., M. D., Ph. B., CHICAGO.

Spasmodic cholera—called also malignant, epidemic, Asiatic, Indian, blue, and pestilential cholera—is generally epidemic, though not contagious. The first symptoms are generally experienced during the night, sometimes beginning with a light general uneasiness and moderate diarrhea; at other times the symptoms come on violently and follow each other rapidly. In fatal cases death usually occurs at some period between six and twenty-four hours; in a few fatal cases the patient lingers two or three days. The ordinary course of symptoms are more or less diarrhea; the discharges at first feculent, but soon presenting the appearance of rice-water or gruel; there are flying pains, or sense of coldness in the abdomen, as if purgative medicine were about to operate; the countenance is pale; there is nausea, vomiting, prostration of muscular power, and nervous agitation; cramps in the legs, arms, loins and abdominal muscles, more or less severe; small, weak pulse, intense thirst, and urgent desire for cold water; in most cases cold, clammy skin; all these symptoms may appear successively or almost simultaneously. In some cases the premonitory symptoms exist for eight or ten days; and sometimes the patient is prostrated at once. When the disease comes on suddenly the cramps usually begin in the fingers and toes, rapidly extending to the trunk; the eyes are sunken and surrounded by a dark circle; there is vomiting and purging of white matters mixed with flocculi; the features are sharp and contracted; the expression of the countenance wild and confused. The face, extremities, and often the whole surface of the body, manifest a varying intensity of a leaden, bluish or purplish hue; the extremities shrunken, the nails blue, the pulse thready or wholly imperceptible at the wrist, arm, axilla, temple or neck; there is great restlessness, incessant jactitation, severe pain in the epigastrium, loud moaning or groaning; difficult and oppressed breathing; difficult inspiration, with short and convulsive expiration; voice hoarse, whispering, or nearly suppressed and plaintive; the tongue is white, cold and flabby, and the external temperature often sinks below 80 degrees; convulsions recur at short intervals, or a constant tremor exists. The secretions of bile, saliva, tears and urine are entirely suppressed, and a cadaverous odor exhales from the body. The patient retains his faculties to the last.

Some of the symptoms may be disproportionately severe, or may be entirely absent. Those usually regarded as pathognomonic are: watery dejections, blue appearance of the countenance or surface, thirst, coldness of the tongue and pulselessness at the wrist.

The foregoing description of the symptoms of cholera is indicative of the nature of the disease calling for human aid. The time in which to treat the patient sick with cholera is exceedingly limited. What is to be done must be executed with rapidity. There is not a moment to lose between the time when the patient is

* By request from the Journal of the American Medical Association.

first seen and the accomplishment of severely practical efforts. Many wise theories may be promulgated, but there are few practical measures that will prevail against Asiatic cholera. The experiences during the cholera epidemic of 1892 in Europe, both in Russia and Germany, produced in me a profound conviction that, for the most part, remedial agencies that have been used are of questionable utility. Nearly every prominent remedy proposed and tried has been found to end in greater or less disappointment. Years ago, great reliance was placed upon the far-famed "mild chlorid of mercury." Twenty and ten years ago this remedy was given in large doses. Three years ago, during the latest epidemic, small doses prevailed. Next to this, the synthetic drug salol, the product of the laboratory of the Imperial Institute of Experimental Medicine in St. Petersburg, was the most widely used and the most favorably received. Professor Nenski, the originator of salol, personally informed me that the value of the drug could not be seriously recommended as of much importance, but that it perhaps answered the requirements as far as any drug could answer, in the hands of his colleagues. Widely circulated and various reports, enthusiastically commending and moderately commending this remedy were received by the Professor in St. Petersburg, but he himself was silent as to its efficacy. The far-famed and seemingly unmatched drug, quinine, has been used, and has been held as a dazzling gem before the eyes of the profession by some of our best men, who believe that cholera is analogous to malarial disorders, and consequently the medicine which occupies the position of keystone in the arch, for malarial treatment, is a remedy suitable to contend with the rapid and desperate symptoms of Asiatic cholera. Quinine has a stout advocate in our own country, in the person of a well-known professor in one of the Ohio medical colleges. It was not used, to my knowledge, in the treatment of cholera during the last epidemic in Europe.

A remedy was brought to Hamburg during the latter part of the epidemic of 1892 by the representative of an English syndicate, who posed as a chemist, not a physician. His remedy was a preparation of iodin, to be administered through the mouth. He called the medicine a periodate, and made some experiments upon patients in one of the cholera hospitals in Hamburg. His remedy, however, was not favorably entertained by the medical authorities in charge of the cholera patients, and whatever claims were reported came through the interest of a friendly correspondent of one of the Hamburg weekly secular papers. To show how misleading some of our supposedly authentic information often is, it is only necessary for me to refer to the report given in the "Year Book of Medical Progress," published in Philadelphia. Of all the progress made, of all the combined investigations during the entire epidemic of cholera throughout Europe in 1892, and there was an immense amount of original investigation and great effort made to discover a remedy, the curious spectacle in the Year Book, which alone refers to the remedies brought by an agent of a syndicate from London to Hamburg, at the closing of the epidemic of cholera, shows that there are some things in our profoundest medical publications that are to be taken cum grano salis. Uretin was extensively used hypodermically for its alleged influence upon the secretions of the kidneys, upon the ground that the kidneys were to be aided by irritating them to greater functional activity to eliminate morbid elements through the urine. The result of many investigations recorded in Russian practice show that this drug is not to be commended. Digitalis was used, supposedly to benefit a weak heart. This remedy, if at all useful, could be little more than palliative. The use of acidulated water was extensively employed in different hospitals in Europe as a drink, but not prescribed as a remedy. The water was acidulated with HCl and H^2SO^4. Subcutaneous injections of salt water were made. The proportion of salt was one-half of 1 per cent., and the

amount of salt water injected subcutaneously was sometimes as much as a quart at a single injection. In one instance, during an illness of several days, as much as thirteen quarts were subcutaneously injected into the cellular tissue, principally that of the abdominal wall. This process of subcutaneous injection was known as hypodermaclysis. The purpose of the hypodermaclysis was to maintain the volume of the blood. The diminished volume of the blood is directly the result of the waste of its liquid portion or serum into the alimentary canal. In this serous discharge, flakes of intestinal mucus gave the name of "rice-water discharges" to the bowel evacuations, the particles having a resemblance to grains of rice. The general inflammatory state of the intestinal mucous membrane, throughout its entirety drains the blood of its liquid portion rapidly, and collapse due to stagnation of circulation quickly ensues.

The remedies mentioned are only a portion of those tried, but there is no living advocate who to-day can point with unerring certainty to one single organic or inorganic substance, howsoever administered, that can be safely depended upon in the treatment of Asiatic cholera. Both botany and mineralogy have been searched in vain for a cure for this disease.

The cause of this disease is perhaps accurately stated to be due to invasion of the blood, and secondarily, of all the tissues of the living organism, by toxins or ptomaines, which originate in the upper portion of the small intestine at the early stages of cholera. These products of organic activity, whether of animal or vegetable organisms it is here unnecessary to debate; but these noxious products enter the circulation through the villi of the intestine and rapidly and desperately poison the blood. It is clearly proved that the disease is the result of general blood poisoning from an intestinal origin. Whatever the chemic nature of the poison may ultimately be found to be, may be safely left to the bacteriologic laboratory. The practical and intensely important part that remains for physicians seeking to cure patients in times of this disease is to realize how much, as well as how little, it is within human power to do. The human organism is prostrated by a fierce and deadly poison. This poison is in the blood and in the cells of the tissues, and its work of destruction is quickly and effectually accomplished. Reflectively, to say nothing of experimental research, it would seem to me that the rational and only course that could be advocated with scientific assurance of relief is to, as far as possible, literally cause to be removed these products which are death-dealing to the body in which they happen to be found. Now, in this same reflective mood, think for a moment and try with me to determine whether it is possible in such conditions as produce the symptoms of Asiatic cholera, it is safer to introduce other poisonous products to neutralize the noxious elements in the blood and cells, or whether it is a better process to, without the introduction of additional foreign substances, remove what we already find in the blood. To make this proposition clearer, it could be stated in another way, namely, the body is already bearing a crushing burden; shall we add other foreign substances as an additional burden to the load already carried? The principle seems to me to be at fault. The principle is the principle of allopathy, but in the light of facts is it a safe principle to follow? It is reasonably scientific to produce in the laboratory definite results in vessels of glass by the use of fixed reagents; in the organic laboratory of the living body, no such definite results can be demonstrated. The vital principle is an entity which enters into the formula and may be represented by the unknown quantity x in algebraic equations. Great and laudable efforts have been made to prevent as well as to cure this disease by inoculation.

Ferran, of Valencia, Spain, thrilled the world ten years ago with his proposition of a universal cure for this disease. His glory was then at its zenith. His fame has long since

faded. So obnoxious became his proposition to the Government of Spain that laws were adopted to suppress Ferran's cholera inoculations.

A worthy colleague and laborious investigator, Professor Haffkin, of Pasteur Laboratory fame, proposed a modified inoculation for the prevention and cure of cholera in 1892. A reporter of the New York Herald was inoculated at the Pasteur Institute, and with credentials sent to expose himself to Asiatic cholera at Hamburg in September, 1892. The same porter had once before been inoculated by Ferran in 1886 and had the courage to make further exploits in behalf of his newspaper, at Hamburg. A very widespread opinion prevails in America that the exploit of the New York Herald reporter during the ten days' stay as a nurse in the Hamburg hospital, constitutes a proof of the validity of Haffkin's claim, but the scientific world of Europe knows differently. En passant, it may be interesting to state at this place that further experiments have been made by Professor Haffkin in India with the cholera inoculations and, unfortunately for the proposition, reports have recently come to me from reliable medical sources, that a greater percentage are attacked with cholera who have been previously inoculated than of those who have not been inoculated. This subject of prevention, however, is to be discussed by me in a paper to be read before the Section on State Medicine.

The result of prolonged reflection, covering many years, and the observations resulting from personal experience in the cholera epidemic in Europe of 1892, is the conviction that there is provided in the laboratory of the universe a remedy which surpasses the result of human ingenuity as much as does the sun surpass in brilliancy the light of the artificial lamp. The all-pervading and all-wide remedy, the greatest product of omniscient nature's laboratory, which alone can cope with this pestilential disease of the human race, is nothing more and nothing less than the unmatched, unmatchable H_2O. Pure water is absolutely the only trustworthy cure for cholera, and if it came at a great price it would probably be more greatly valued. The human organism is so constituted that if it is assisted by H_2O, every morbid element may be eliminated out of its domain. The acutely poisoned body quickly recovers its equilibrium and its harmony of action as soon as the processes of elimination can remove the invading poison. In the construction of the mucous lining of all the accessible cavities and channels it is prepared by an undiscernible law to successfully resist the entrance of every form of organism. The products of organic action alone are able to pass into the blood. If sufficient quantities of pure water, of a suitable temperature, are introduced into the body through the natural channels, it is actually possible to wash morbid products as well as organic forms of life, out of the human body. The mouth gives entrance to the causative germs in Asiatic cholera. That is quite conclusively established. The locality of the development and formation of the toxin in the earlier stages is determined to be in the upper end of the small intestine; and from experience, as well as from the powers of reflective analogy, there is no doubt that the system can be saved from death if the morbid entity, the germ, is literally deluged away from the alimentary canal by the copious use of a remedy that connot be of the slightest danger to the victim. The amount of water to be used varies in different cases. It is impossible to use too much; it is possible to use too little. From the earliest moment that the patient is seen the propositions should be, first, wash the whole alimentary canal with pure water; wash the lower portion by introducing irrigations of warm soapsuds or merely warm water into the color sufficiently frequently and sufficient in quantity to cleanse that portion of the bowel effectually. The frequency of washing that portion of the bowel which is accessible from the rectum should be one, or two, or three, or four times a day, according to circumstances. At the same time from one to ten quarts of warm pure water

mildly medicated with peroxide of hydrogen or hydrozone should be administered at regular intervals, during the day, as the prescribed remedy by the mouth. If the patient vomits, very well. Immediately reintroduce the quantity of water that was vomited. No harm can be done in any case, and if it is possible to save life it is possble to save it through this method. It is the quickest and the surest method of exciting the kidneys, and is the safest. It is the rational and effective measure for maintaining the volume of the blood. It is the scientific process by which to establish cutaneous circulation in the capillaries.

The use of simple and useful hygienic measures are the same as in other prostrating diseases. Patients should be fed with regularity at not too frequent intervals, giving the proper time, between administrations of simple food, for its digestion. The use of appliances for maintaining the heat of the body are not to be neglected.

The precise details of the method of treatment indicated at this time will be forthcoming in a subsequent paper.

100 State Street.

THERAPEUTICS.

By E. B. Pratt, M. D., Fairport, N. Y.

Dr. Johnson in one of his books remarks that mankind does not so much need instructing as they do reminding.

I think the same may be said of this society and in presenting a brief paper on Therapeutics I do not presume to instruct but only to remind you of some neglected points pertaining to our subject.

In certain of the sciences which are made up of different branches of study, there is one principal object which both unifies the science and determines the value of its different parts. In the science of medicine we have an illustration of this. There are its different branches of study, which in themselves have a real worth and also a relative value as connected with its great purpose, the prevention and cure of disease. Physiology, pathology or chemistry, for example, have a value as subjects of separate interest and investigation; but of how much more value to the physician, as progressive steps in the preparation which he makes for his daily duties. To correctly appreciate this relative value is plainly a most important and necessary condition to successful study of the science and prosecution of the art. In theory the truth of this may be readily admitted, but in practice it is often ignored. If we may judge from appearances, it seems to be thought of more importance to be able to diagnose a disease than to treat it; of more importance to be known as a bacteriologist, or pathologist, or physiologist than a successful and accomplished therapeutist.

In these departments of knowledge mentioned the advances which have been made are very great and valuable, and plant our science on a firm basis of reason and facts.

But when we turn from these captivating fields of study to the more prosaic, but not less useful one of therapeutics, we seem in comparison to have entered a barren and uncultivated region. If such a statement appears extravagant, we need but ask you to go back in memory to your college days, and recall how general it was in the clinics to give careful attention to the pathology and diagnosis of a disease, and then dismiss the treatment with a few prefunctory statements and remedies. Notice, too, how few books of original research are published on this subject as compared with those on the others; how little real enthusiasm for the study is manifested in the profession; how small an amount of space is given to it in our large journals, and in our society meetings how limited the time and interest granted to the consideration of therapreutics. Naturally, we may ask the reason of this indifference. It is because medicines and therapeutic efforts are valueless, or because we think they are, and so consider it unnecessary to give them much thought or trial. We assume here what we shall try to establish, as we go on,

that it is our want of knowledge of the action of remedies and remedial measures rather than their inertness that makes us lukewarm as to their examination and use. We inquire then as to the cause of this neglect. We notice first, that special enthusiastic study of this branch is not fashionable, and let it be said, so softly that the general public will not hear it, that doctors are as vulnerable to fashion's behests as the softer sex. A fad takes with them as it does with the ladies.

Very few graduates after leaving college and stepping out into independent life choose the field of therapeutics to become famous or experts in. The great ambitions and expectations engendered by college and professional associations run to more brilliant fields. At this present time, with the germ incubus firmly fixed upon the profession, and a consumption scare upon the laity, who had not rather pose, with meteor-like splendor, as a profound bacteriologist, bowing down to microbes, than to quietly illuminate the more difficult and obscure path of therapeutics, with painstaking, methodical labor. Is it not true that most of us had rather be distinguished as a great pathologist or expert diagnostician than a skillful prescriber?

Another cause and also consequence of this neglect is the skepticism as to the value of medicines in the treatment of disease. This unbelief certainly discourages, if not wholly diverts thorough work and study. There are some of our unbelieving brothers, perhaps more particularly those who go about with a curette in one hand and a drainage tube in the other, who are fond of declaring that the longer they practice the less medicines they use, and as we are supposed to grow more learned as we grow more experienced, what conclusion would more naturally follow with many than that a large faith in physics is synonymous with a large degree of ignorance. What better argument can we give to the public for the homeopathist than this, that the wiser we grow the nearer to nothing we become. With human nature as it is, the ordinary patient does not reconcile the expectant plan of treatment with his necessities. He wants his physician to do something more than to stand simply by his bedside and watch nature in her unmoved course towards a cure or death. Is not this distrust only the opposite swing of the pendulum from the numerous compounds, the large doses and useless drugging of former years? Is there not a golden mean yet to be reached when definite, certain and reliable knowledge of the action of remedies, singly and combined, will supersede some of the present vague and distrustful notions?

We remind you again, that the marked progress made in surgical science and skill has operated against the advancement of therapeutics. Surgery covers a large horizon; it stirs the ambition and offers great prizes, so much so that many would fain believe that there is nothing else of importance to do outside of their domain. The desire to operate grows by what it feeds upon, and in time how easily a surgeon comes to consider cutting as the only means of cure or relief from certain diseased conditions, and to regard in the same measure the more conservative efforts of physicians with contempt.

They claim already to have rescued numerous diseases from the domain of medicine, and thereby saved to the human family many a hopeless case beyond the power of the physician to help or cure. As striking examples, gynecologists would have us believe that about every ill that female flesh is heir to—as female flesh—can be remedied by removing some part of the uterine adnexa. If evolution and surgery should chance to operate together in the future, no one can prophesy what the new woman will attain to in the hereafter. We may take another example as to abdominal surgery. Some say if a person is constipated over 24 hours with a pain in the right groin, and a seidlitz fails to act, he has appendicitis, and his abdomen must be laid open at once. Others go still further and advise the removal of the appendix in

health as a precautionary measure. The reasoning is conclusive, take out the appendix and put it in alcohol and you cannot have appendicitis. Nothing plainer. It was only recently that I read in one of our medical journals of a physician who had treated 15 cases of the disease with sweet oil and all recovered.

Positive knowledge would result only from many observations, close scrutiny and careful reasoning—one reason, perhaps, why it has been neglected. One writer speaking of it says, "the task is a laborious one, the difficulties are great, but the knowledge that this is the sole path leading to the wished-for goal, the conviction that the smallest well authenticated fact in therapeutics is of profound importance, will inspire the perseverance in research requisite to make therapeutics an exact science, which may take equal rank with other branches of physicial study." The line of investigation for the future, by the wise, will be less search after new and fantastic remedies, and more thorough study of the old ones that we have. No two medicines are just alike, and special adaptation to special conditions will be one of the chief ends sought for. If I should ask why aconite or veratrum or antipyrine would meet certain states or variations of diseases better than digitalis or strophanthus or gelsemium, who would be ready to give an immediate answer. There can be no question but what every remedy, if it has any decided action at all, may be specific in one sense, in its individual action, which meets some peculiar diseased state. Dr. Squibbs says, "How can any well-balanced mind refuse to admit the special adaptation of drugs and the value of study, by which their uses might be developed and realized, in view of such examples as are furnished in the adverse action belladona and calabar bear upon the two extremely delicate planes of contractile fibres which constitute the iris, in the action of American hellebore on the heart, in the action of anesthetics upon the nervous centres, in the action of ipecac and buchu upon the mucous membranes, and in the action of ergot upon the uterus."

Physicians at the present time are in possession of better weapons of warfare against disease than formerly, and can make their use and usefulness more definite and certain. The advances in pharmaceutical skill and knowledge have given us not only purer and pleasanter medicaments, but more important still, the alkaloids—the active principles in separate and exact doses, whose use in time we believe will supersede that of most other preparations. In these pure products we have one active principle freed from extraneous matter, in the possession of which we have the first main condition for accurate study and advancement. Professor Laren recently said in regard to alkaloids, "It is with infinite pleasure that we proclaim to-day the immense benefit rendered to suffering humanity in introducing in therapeutics the alkaloids, and in general, the purest medicaments perfectly isolated and mathematically dosed." Therapeutics is a field in which all can engage, for it is not limited to specialists. It opens especially a wide door of usefulness and success to the country practitioner, who can excel there as well or better than the city or hospital physician. Our city brothers, I suspect, from some remarks they occasionally let drop, are apt to think that we in the country are slow in accepting and availing ourselves of the wide heralded advances in medicine and surgery, and I presume there is some truth in this. Being the backbone of the profession we have to be more conservative, and therefore become less inclined to pick up and ride the unproven fads and hobbies as they are sterilized and put forth by some German or French scientist. Be that as it may, the general practitioner, city or country, has a better opportunity than others to make for himself a speciality, a specialist in thearapeutics, for he has to be in touch with all diseases, all ages, and all temperaments. And in the present state of the practice of medicine is it not due to ourselves, as general practition-

ers, that we replevin some of our lost heritage, for it is true that we have lost ground. Between the enlargements of hospitals and hospital staffs the increase of free dispensaries and dispensing, between the specialist, the trained nurse, the midwife, the Boards of Health, the Christian scientist, the faith cures, the sanitariums, the patent medicine men, the cancer cures and the bacterian, the general practitioner, one time honored and able, has fallen among more thieves than that ancient traveler overtaken on the road to Jericho. And why should the family doctor, the most valuable member of the profession, become one who merely shakes the tree, while the fruit falls around into these different baskets. Is it not partly our faults, and the remedy in our hands, and is not this the remedy, that we must be better therpeutists and by a greater success in curing or relieving or palliating disease, hold our patients from leaving their first love and wandering after other gods.

Abstract from N. Y. State Med. Reporter.

ANTISEPTIC TREATMENT OF THE NAVEL IN THE NEWLY-BORN.

Schliep (Therap. Monatshefte, June, 1895) advocates antiseptic treatment of the stump of the umbilical cord after childbirth, instead of the usual dirty treatment commonly adopted. He mentions Schroder, who insisted on strict asepsis during and after treatment of the cord by means of antiseptic baths and treatment of the stump with dermatol, which hastened the process of mummification. By this means Schroder showed that many sources of infection were avoided, especially contamination by dirty bath water. Schliep advocates this treatment, but substitutes for dermatol a 2 per cent. solution of silver nitrate, applied twice daily by means of a brush. He states that the day after birth the stump begins to become dry and leathery, on the second day it has shrunk to a fifth of its normal size, and on the fourth day the treatment is complete.

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PHILADELPHIA, AUGUST 17, 1895.

THE ETIOLOGY OF GOITRE.

Dr. H. C. L. Morris, writing in the British Medical Journal, speaks of his experience with goitre in Hambledon, a small town of two thousand inhabitants in Buckinghamshire, England. In the space of two and a half years fifty-five well-studied cases came under his observation. The soil of the district from which the patients came was extremely chalky, the chief source of water-supply being from wells sunk into the chalk. All of the cases were water drinkers, only four of the number males. The ages ranged from four to seventy-six.

The conclusion to which Dr. Morris' study leads is that the presence of calcium and magnesium carbonates in the water was the sole cause of the disease in his cases. In making this statement he does not exclude the possibility of other causes

in other regions. The writer is confident that heredity had nothing to do with the etiology of his cases. In but one case was there the slightest suspicion of it as a causative factor. Nor was he able to determine that intermarriage played any part in the propagation of the disease.

Altogether the communication is a valuable one, and throws new light upon a still more or less open question.

CEREBRO-SPINAL MENINGITIS IN AN INFANT.

A case of meningitis at the unusually early age of six days is reported by Dr. T. M. Rotch, in the August number of the Archives of Pediatrics. The infant was healthy at birth and remained in perfect health for six days, when she began to have convulsions. The temperature rapidly rose, reaching 104.2 degrees F. The temperature subsided somewhat, but the convulsions were frequently repeated until they reached fifty in number. Death occurred on the eighth day of life.

The onset of the attack followed a period of extreme nervous excitement of the mother, who was nursing the infant. When first seen by the author in consultation with Dr. W. L. Richardson it seemed possible that the convulsions were of a reflex form, such as might follow from disturbance in the breast-milk. The absence of retraction of the head, opisthotonos, any abnormal symptoms connected with the eyes, and the perfect tranquillity and apparently healthy condition of the infant in the intervals of the convulsions, made the supposition of the convulsions being reflex still more probable.

The post-mortem examination was made by Dr. W. F. Whitney, eighteen hours after death. The calvaria presented nothing abnormal. The inner surface of the dura mater was covered with opaque, yellowish patches, the lymph being especially marked over the base of the skull. The vessels of the pia mater were filled with an opaque, greenish-yellow, purulent exudation. This extended over the entire brain and into the spinal canal. Microscopic examination showed the presence of large micrococci, usually associated in pairs, two of which were sometimes united with a chain of four (pneumococcus). Other organs of the body were normal. The condition was, therefore, acute cerebro-spinal meningitis with general venous congestion. The author reports the case to warn us that a most guarded prognosis should be given in all cases of infantile convulsions.

THE WHEEL A GREAT FACTOR IN THE DEVELOPMENT OF THE FRENCH WOMAN.

According to the recently expressed opinion of Dr. Championniere, member of the Academy of Medicine, Paris, the advent of the bicycle has proven a great boon, especially to French women. It has increased her muscle and expanded her lungs, relieved her of superfluous avoirdupois, improved her carriage and gait, while her heart and brain are stimulated to normal healthy action. Dr. Championniere bases his conclusions upon close investigations covering the past four years.

Our subscribers will do well to investigate our bicycle offer for themselves or their patients.

Surgery.

IN CHARGE OF
DR. T. H. MANLEY, New York.

THE BICYCLE FROM A SURGICAL STANDPOINT.

From the medical point of view, this subject has chiefly been discussed in connection with the effects of overexertion. The latter are well-known, are observed in every form of outdoor exercise, and form, with the greatest propriety, a text for warnings the neglect of which may bring about, in some instances, quite serious results.

As surgeons, the important question to us is whether bicycling has a tendency to bring about any peculiar bodily malformations due to its use,

whether moderate or excessive and to cause any distinct surgical diseases.

In the very first place we must speak of the leaning over indulged in, to a greater or less degree, by the majority of wheelmen. It would necessitate the printing of many and corpulent volumes to produce all the exaggerated and nonsensical statements that have been published in reference thereto. As a matter of fact, the writer, whose experience with bicycles dates back nearly a quarter of a century, is convinced that an absolutely erect position of the body, while riding a bicycle, is a mistaken one and is fraught with possibilities for harm. Sitting absolutely straight in a bicycle saddle tends to throw all the weight upon the rider's seat, whereas a certain amount of leaning forward distributes the weight more evenly, as the shoulders then bear an appreciable amount of the burden. A moderate amount of bending forward facilitates the steering, gives better play to the pull of the arms upon the handles and allows of greater force being applied to the pedals. An exaggerated leaning forward may certainly produce a gradual vertebral displacement, and is decidedly ungraceful.

If a race meet is attended, and the interested looker-on closely observes the athletic contestants, he will certainly notice that they are as straight and well set-up a lot of young men as can usually be seen, and that their bent positions appear to be entirely reserved for the actual riding time. Now that nearly every young man, and a good many old ones, ride, we will certainly occasionally see cases of spinal difficulty in bicyclists, but we will have to use caution in asserting that the wheel itself has been at fault. A hump backed gentleman of our acquaintance, who rides a wheel and enjoys it greatly, told us the other day that on several occasions he had been asked if the wheel had not "done it," and that he has been pointed out as an awful example. But as his hump dates back from his nursing days he continues his riding.

Upon somewhat better ground attention has been called to the possibilities of rectal and prostatic troubles due to bicycle riding. The writer feels justified in saying that such troubles rarely occur as a direct result of wheeling. Hemorrhoidal troubles are so nearly universal in men that caution is needed in ascribing ther occurrernce to the use of the bicycle in every instance in which they happen in a rider. It is easily conceivable that if the saddle, or the clothes worn by the rider, chafe or irritate the peri-anal region in an individual whose digestive organs are not in good order, an attack of piles may occur.

As for prostatic troubles, we have been assured that some have been observed as direct results of riding. In our long experience of wheeling we have failed to see any cases, but there is good reason to believe that caution is necessary in advising male adults to ride, and that the existence of prostatic trouble should be a signal for giving up the wheel.—International Journal of Surgery.

THE RADICAL CURE OF UMBILICAL HERNIA.

Lucas-Championniere (Revue de Chirurgie, 1895) advocates the radical cure of umbilical and epigastric hernia. Although such treatment is not so frequently applied to these as to other hernias, the indications for operation may be regarded as more urgent in the former.

Umbilical hernia usually attains an enormous size and causes much discomfort. It is never effectually retained by truss or bandage. It assists in bringing about rapid organic failure, marked by diabetes, albuminuria, and premature senility, and is almost always complicated by obesity and pulmonary emphysema. When the hernia has acquired a considerable volume it is no longer amenable to surgical treatment, as the swelling will very probably return through the large opening in the abdominal wall. In cases of small umbilical hernia a solid radical cure may be effected. As umbilical hernia presents itself in many forms, it

is impossible to state absolutely the details of the operation for radical cure.

In this, as in other forms of hernia, the main objects of such treatment are to remove the sac, to secure its pedicle, and to close the orifice in the abdominal wall by sutures arranged in rows, so as to establish a firm cicatrix. In most cases in which the sac is removed it is necessary to excise the umbilicus.

In operating upon umbilical hernia, the author usually removes a large mass of omentum, and thus by reducing the tension of the abdominal walls lessens the tendency to relapse.

The opening in the peritoneal cavity is to be closed by five rows of sutures, one for the peritoneum, one for the skin, and three for the different muscular layers.

The author has operated eighteen times with good results, but in some of the more severe instances he had to contend with serious symptoms of pulmonary congestion.

He had also operated in eleven cases of epigastric hernia. This form of hernia, unlike umbilical, has hardly any tendency to increase in size. It is usually painful, and often accompanied by vomiting.

The hernial orifice should be freely ercised, and the sac drawn forward, opened, and detached from surrounding parts and removed together with any omentum it may contain. The pedicle of the sac should be ligated before division as far back as possible. The opening is then closed by three rows of sutures, one for skin, one for peritoneum, and a third for the intermediate portions of the abdominal wall. In the author's practice this operation has never been followed by a relapse.—University Med. Mag.

THE OPERATIVE TREATMENT OF WRY NECK.

Mikulicz (Centralblatt fur Chirurgie, 1895), being dissatisfied with the results both of subcutaneous and open division of the sterno-mastoid in cases of wry neck, advocates almost the total removal of the contracted muscle, the posterior part of the upper extremity, where it is traversed by the spinal accessory nerve, being left. He has operated upon seventeen cases with success, the only bad results being the disfigurement of the neck caused by the absence of the muscle. Examination of the extirpated muscle in these cases has convinced him that wry neck is the result of a chronic inflammatory condition (myositis fibrosa) involving the whole of the sterno-mastoid muscle. This condition he attributes in congenital cases to compression of the muscle during a long, difficult labor than to laceration. The so-called hematomata of the sterno-mastoid sometimes observed in infants is not due to effusion of blood, but to thickening and induration of the inflamed muscle.—University Med. Mag.

Electro-Therapeutics.

IN CHARGE OF
DR. S. H. MONELL, New York.

STATIC ELECTRICITY — METHODS OF ADMINISTRATION.

Article 3.
(Copyrighted.)

The most soothing application is the positive breeze. With this the electrode may be held quite near any part of the body. It does not easily give off a spark to startle the patient unexpectedly, and it does not tend to irritate, but it involves a negative insulation which is not only often less effective than the positive, but is occasionally undesirable. The positive breeze may be applied to the head, spine, or any part of the body with very little fear of irritating the patient. Not so the negative breeze with positive insulation, attaching the electrode either to the negative pole or to the gas fixture. Upon uncovered surfaces it is prickling (and for many exceedingly unpleasant) if the electrode is held at a distance. To be agreeable it requires to be held almost as near as may be without drawing a spark, and two or three inches is my usual rule. A head breeze can be given in this way if

the patient is bald, but if hair abounds upon the head, or if applied to any clothed surface, the electrode must not only be removed to a distance—12 to 20 inches or more—but the breeze should be kept in gentle motion to avoid an annoying prickling in certain spots. The thickness and quantity of the hair may make it difficult to give this form of breeze from a stationary electrode, although the patient may sway the head from side to side to suit his or her sensations. Upon the head also, a lady's hairpins, if metallic, may play havoc with your efforts to please, and it is the writer's custom to substitute vulcanite hairpins before commencing treatment. Occasionally metallic ornaments about the neck will cause discomfort, and should be protected, removed or avoided by the operator. About the spine and abdomen steel buckles, buttons and corset ribs may be an interference with both breeze and sparks. In a general way it is also better to have a patient lay aside keys, watch, eyeglasses, etc., if local applications are to be made in their vicinity; but in most cases the tact of the operator will sufficiently avoid these sources of discomfort, and it is better, if possible, to request few changes in a patient's garments. It is rarely necessary, and the trouble of taking off her corsets for treatment will not increase the popularity of static electricity with a fashionably attired lady. But all our care in administering the breeze is not dependent upon hidden corset steels and metal hairpins. If the coat or dress waist be of silk or cotton fabric the best effect is obtained with the electrode almost as near as the current strength permits without a spark, gently sweeping the electrode over the region treated and drawing it away with such manipulations as experience discovers to suit the particular case in hand. If, however, the fabric is of wool the sensation produced may be unpleasant. If tightly woven and thick the breeze will perhaps, be scarcely felt, and must be applied correspondingly near. If the woolen garment be of loose texture it may be difficult to find any distance at which the electrode may be held to make the negative breeze agreeable to the patient. Certain desired effects may, however, be had by rapidly sweeping the electrode to and fro, and the prickling may be modified in various ways, such as covering the part with a handkerchief or towel, diminishing the speed of the machine, or by leaking off part of the current supply. An exceedingly mild and exquisite breeze may be obtained, when extional conditions call for the utmost refinement in our measures, by simply holding a finely pointed electrode in the hand without grounding it in any other way. It should be grasped by the operator upon the metallic part without opposing any of the insulating rubber handle, and, when moved with gentle passes near the patient's head or spine, the breeze imparted is of the mildest nature.

At times the reverse is desired, and we wish to increase the intensity of the breeze. This may be done by quickening the machine, by having the patient in direct connection with the positive pole, by placing a layer of flannel cloth over the part, if it is covered with a less resisting substance; but most of all, the activity and force of the breeze may be increased, while its irritation is often diminished, by interrupting the current by the author's method, as elsewhere described. On the whole the breeze application is susceptible of great variety, and if skillfully handled, with due tact and prudence, it will do more than any other form of electrical application to establish a large and gratified clientele. If the physician who wishes to excel in technique will seat himself upon the platform and personally test the sensations which the spray electrode will produce under the different conditions we have referred to, it will be time well spent and money saved; for a disagreeable shower of "pins and needles" may lose a new and nervous patient as readily as a luckless spark.

The static spark requires to be somewhat sparingly and prudently administered. Its redeeming feature, which alone preserves it from obloquy, is its tremendous power for good. If the suggestions here made

are followed, it will be disarmed of its more serious drawbacks and will be a most potent influence in contributing to the great sum of results attributable to static electricity. All cases do not require sparks, and when sparks are especially indicated mild ones may often serve the purpose.

To apply sparks, we have the patient insulated as before and continuing to be electrified; either positively or negatively, as the case may be. In our present illustration we have the positive pole attached to the platform. The spark is given with a spherical electrode usually, although any metallic electrode will give off some kind of a spark, if it is placed in a position to do so. The round extremity of the electrode may be of various sizes, and the thickness of the spark will be partly dependent upon the surface area of the ball. We take the largest one—say two inches and a half in diameter—attach it to the grounding gas fixture by the chain we have already used in employing the breeze electrode, and explain to our patient what is coming. Never apply a spark without first telling the patient to expect it. It is rarely advisable to administer sparks at a first sitting, if the patient is a stranger. After several treatments the system acquires a degree of tolerance, especially after confidence has been established by the tact and skill of the operator. If the patient is an acquaintance a brief explanation may suffice to prepare him or her for any form of application that may be desired, but it is my custom to know all nervous patients who have never had sparks exactly what they are, tell them how they feel, and obtain their confidence before administering this treatment. I then slow down the machine, if necessary, leak off part of the current force with my foot against the platform, and deliver a single mild spark upon a part where it will be well borne, usually the fleshy part of the middle thigh or upon the spine. This done, the patient's uncertainty and dread is ended. She has felt just what the spark is, and seldom offers any further objection. Not always is the spark found to be disagreeable. A surprising number of patients will claim to really enjoy mild and skillfully directed sparks. Cases will be met in practice in which, indeed, the spark is the most welcome form of treatment. The torpid tissues of a paralytic limb may be so insensible to stimulation that the heaviest sparks that can be obtained from an ordinary machine are calmly witnessed by the patient, who regards the blows with manifest indifference; and in morbid states of sluggish natures and lymphatic temperament, the sparks will seldom raise any objection.

If the long spark is discovered to be painful and exceedingly distressing, it is well to be very sure that it is indicated before giving it. It is generally found to be most bearable, most welcome and most beneficial where it is most truly indicated; and, on the contrary, it is least tolerable when least required, though there are exceptions to this rule. A toleration also is often speedily developed. Once across the Rubicon with a new patient, the strength and vigor of your sparks, which have always at first been mild, may be adjusted to fit the case, but let the accession of vigor be imparted gradually. Sparks should be no heavier than needed to do the work. They should first be tested in a mild form before resorting to the most powerful that can be given. They should be clean, thick, distinct and single; with both an interval of time and a "change of base" between everyone administered. A rapid fusillade of sparks is often unpleasant. A number upon the same spot is apt to create a tenderness. A long thin spark is usually stinging, while a thick one is less so. If the spark "splits" and gives off fragments, seek the cause and correct it, for such a spark produces an uncomfortable sensation. About the throat and various parts of the body it is often desirable to accurately localize the spark, while attracting promontories near by render this difficult to accomplish. A spark-director is made for such a purpose, but it is expensive. An insula-

ting plate of vulcanite, or even of wood, pierced in the centre for the passage of the spark, is also occasionally employed. These devices, however, are seldom an absolute necessity There is scarcely a spot upon the exterior of the body where a spark may not be exactly placed by drawing aside the adjacent parts, slowing the machine, and sending the ordinary electrode to the spot with a quick, sharp stroke. A nearby prominent part may be protected also by laying over it a folded paper, or something to obstruct and lessen its attraction. Having a case for powerful sparks in hand, we may now increase the effect in several ways. Putting the machine into more rapid action is usually sufficient in favorable seasons. If more than this is required, we may again make direct metallic connection between the patient and the machine. The conducting rod or chain may be held in both hands or placed under both feet. Caution will be advisable if this is done, for the first result may surpass your expectations. If this proves less powerful than is desired, however, as may be the case in damp and summer weather, a pair of small Leyden jars may be brought into the circuit.

Medicine.

IN CHARGE OF

DR. E. W. BING, Chester, Pa.

THE BICYCLE AND MEDICAL PRACTICE.

The use of the bicycle has expanded and developed from a salutary athletic exercise into a great social obsession. It has seized upon every class of seciety, both sexes, all ages, and every condition of life. It is taken up by the well because it makes them feel better, by the invalid because it makes them well, by tired people because it rests them, and by the rested because it makes them feel tired. The fat ride to get thin and the thin ride to get fat. It has displaced the horse, and in women has, in a measure, replaced the uterus. It has made the simple and ancient custom of walking most unpopular, it has cut down the function of the steam car, and competes successfully with the suburban trolley. The doctors have taken it up and expressed their approval of it, and we are far from saying a word in opposition. The bicycle has come to stay, though not with quite the omni-present activity which it now enjoys. Already we notice grave and reverend seigniors in our profession riding along the cobble-stones in their golf suits instead of lying comfortably back in their victorias. Time that used to be spent in serious scientific pursuits at the hospital, in the laboratory, and at the desk is now shortened in order to enjoy a ride up the Boulevard. The bicycle has cut down the scientific activity of the New York profession at least fifty per cent. already.—The Post-Graduate.

NEW FOOD FOR CONSUMPTIVES.

Dr. Brewer, of Chicago, has a new idea concerning food for consumptives. In addition to inhalation of the fumes of vinegar he feeds them on peanuts, gives them all they can eat without dangering their digestive organs. Two young ladies who had been the rounds of cod liver oil and tonics without material benefit, were put on his treatment and recovered. Concerning the diet he says: "I now commenced feeding (do not laugh) peanuts. One would think this a very indigestible diet, but they craved them, and it has always been my policy to find out what my patients desire to eat, and unless it is too unreasonable I humor them. Both young ladies have become quite plump, and after a year's inhalation have ceased coughing, and I pronounced them well. The peanut was long known as an excellent fat producer, and much more agreeable than rancid stark oil that oftentimes is sold for cod liver oil. While not all can digest peanuts, a great many even with feeble digestion, eat them without discomfort. It beats the

Koch lymph and is the most satisfactory treatment I have ever tried for these diseases."—Med. Fortnightly.

BICYCLING FOR WOMEN.

The much-discussed question as to whether bicycling is per se an exercise suited to women is, perhaps, now of minor importance, since it has become fashionable, and will, consequently, be adopted by the gentler sex, without much regard as to its immediate or remote effects. Its popularity is, however, a very satisfactory proof as to its capacity as a giver of health and pleasure, since it is not conceivable that the bicycle could ever have won its way, as did the corset, for instance, as a fancied adjuvant to physical charms. The late Dr. William Goodell, wise in an unusually wide experience, gave the exercise his unqualified indorsement, and from the almost entire absence of adverse criticism, it is apparent that the majority of gynecologists are of the same mind. The whole question is an exceedingly simple one, and has been summed up by Dickinson (American Journal of Obstetrics), who concludes a very clear and complete paper upon this subject as follows:

Under proper conditions of costume and posture, with care that the exercise be gradually increased and properly graded for the individual case, and where there is no acute inflammation to contra-indicate it, bicycling will probably show itself capable of large results as an agent in curing pelvic disorders, since it is one of the few exercises which attract women.

In view of woman's disabilities and the disadvantages under which she has suffered in attempts to obtain interesting and beneficial muscular exercise, it seems hardly too much to say that the promise from the bicycle is far-reaching. Through it and the habits it will engender we look for better dress, freer dress, shorter dress in bad weather; for better exercise, for out-of-door activity, for steadier nerves, stronger muscles, painless periods, easy labors.—Med. Reporter.

Therapeutics.

IN CHARGE OF
DR. LOUIS LEWIS, Philadelphia.

FERRATIN.

Marfori (Archives Italiennes de Biologie, Tome xxiii, Facs. i-ii, p. 62) gives the results of some new researches on the absorption of ferratin and its biological action. He says that the different conditions in which the mucous membrane of the intestine happens to be largely affects the quantity of ferratin that can be absorbed. In order that absorption may take place, before all things it is necessary that the preparation should not be decomposed in the gastro-intestinal canal, but the sulphuretted hydrogen, which is sometimes present in the intestine in large quantities, may attack the ferratin slowly, and bring about its decomposition. Researches on the absorption of this substance may, therefore, give very different quantitative results according to the greater or lesser intensity of the putrefactive processes going on in the intestine. The large amount of absorption (13.7 to 41.68 per cent.) that occurs after administration of saline purgatives Marori ascribes in part to the asceptic condition of the intestine, and in part to the fact that saline purgatives cause a desquamation of the upper layers of the intestinal epithelium, and therefore expose a thinner layer of young cells through which absorption more readily takes place. When the gastro-intestinal canal is in its normal condition the absorption of ferratin is much less, according to Schmeideberg, but since the latter's experiments render it impossible to distinguish between the iron of the ferratin and the iron introduced in the food, Marfori proceeded as follows: He administered to the animal a saline purgative, and fed it solely upon milk; the lower part of the intestine was also cleared by saline enemata. About a week later ferratin was given in repeated doses. The amount absorbed varied between 11 and 30 per cent. of the amount administered. With refer-

ence to the question whether ill-effects might not arise from long-continued administration of the drug, Marfori found that it was impossible to poison animals by injecting large doses into the blood; nevertheless a man would need to take about 2 1-4 pounds of ferratin in the course of a month to produce a similar result, assuming as a basis for calculation experiments on dogs. Since he would actually, however, only receive about one-twentieth of that amount, there is no danger in continued administration of the drug, a statement confirmed by clinical experience.

TRIONAL IN INTERNAL DISEASES.

Spitzer (Wien. klin. Woch., June 6, 1895) reports the results obtained in Drache's clinic from the use of this drug. It was tried in a great number of cases (25 of which are given in detail), and a dose of 1 to 2 g. given in the early morning after several sleepless nights. Conclusions: (1) Trional is not only a hypnotic for different forms of psychoses, but acts equally well in lung (especially phthisis) and heart cases. (2) Sleep is induced quickly, and continues as a rule during the following night. (3) Some patients remained stupid with sleep even the whole of the next day, but as a rule the sleep resembled that of a normal person. (4) No bad effects on the circulation or respiration were observed in any case. (5) In isolated cases retching, and even vomiting, occurred on waking; this seemed to be due to idiosyncrasy. (6) The results were also excellent in insomnia due to intercostal neuralgia, rachialgia, sciatica, lightning pains of tabes, and even the pain of cancer. (7) The effects approached those of morphine more nearly than of any other hypnotic.

BENZO-NAPHTHOL IN TROPICAL DYSENTERY.

Benzo-naphthol has been employed by Dr. Jose A. Clark in an epidemic of dysentery which occurred in Alquizar, Cuba, and during which he had 137 cases of the disease under treatment; of these he considered 23 as serious and 114 as of a mild type. The mortality amongst those treated with ipecacuanha and calomel, opium, etc., amounted to 9 per cent., while that amongst those threated by benzo-naphthol was scarcely more than 2 per cent. This drug had the great advantage over the more usual ones of not causing vomiting, salvation, or depression of the circulation, and it also brought patients through the attack more rapidly. Forty-five grains per diem were given to adults and but little less to children.—Lancet.

HYPODERMIC INJECTIONS OF CARBOLIC ACID IN TETANUS.

By means of a series of subcutaneous injections of carbolic acid Dr. Osherovski has successfully treated an apparently hopeless case of tetanus. The patient was a man who had a gunshot wound in his left leg, which was followed ten days later by tetanus, commencing in the muscles of the lower jaw and going on to general spasmodic contractions. Morphia, opium, and chloral in large doses were given without any effect, the spasmodic seizures only becoming more frequent and more severe. After the tetanus had lasted for ten days subcutaneous injections of carbolic acid of the strength of 2 per cent. were tried, twelve drops being injected every three hours. After two days of this treatment a marked improvement manifested itself, the spasmodic attacks becoming less violent and the respiration more easy. The injections were continued until twenty-eight had been given, and a few days later the patient was discharged completely recovered.—Lancet.

FORMOL AS A DISINFECTANT.

As a substitute for sulphurous acid, now commonly used in the disinfection of rooms and articles of wearing apparel after the occurrence of infectious disease, MM. Berlioz and Trillat some time ago proposed the use of formol or formaldehyde,

and M. Bardet has recently undertaken a series of experiments in conjunction with M. Trillat which appear to show that the substance in question when prepared in considerable quantity and disengaged in a room or even in one of the rooms of a house where all the internal doors are open, is a perfectly safe and efficacious disinfectant. They found that by the use of an apparatus converting one litre of methylic alcohol into formol per hour for six hours a set of rooms with a capacity of 300 cubic metres could be absolutely disinfected, and this without the slightest deleterious effect upon furniture or other articles contained in the rooms, a few hours' ventilation being sufficient to restore all the contents of the rooms to their original condition. The experiments were conducted by means of injecting animals with cultures obtained from pieces of woolen, cotton, or other fabric which had been previously impregnated with various forms of virus and then subjected to the action of formol after various periods.—Lancet.

PERMANGANATE OF LIME.

M. Bordas read a paper, at the meeting of the Academie de Medecine, on the antiseptic properties of permanganate of lime, a salt which crystalizes in deliquescent brown needles. It decomposes easily a frigore in contact with organic matters, into oxygen, oxide of manganese and lime. Its action on micro-organisms is very powerful and superior to bichloride of mercury, while it has the advantage of not being either toxic or caustic. He made the following experiment to test its efficacy. He composed a solution of the salt in the proportion of half a drachm to a litre. On the other hand, he introduced into several recipients, containing each a litre of water, the bacillus coli communis, bacillus virgule of Koch, bacillus of Eberth, streptococcus of erysipelas, and the bacillus of Charbon.

Cultures of these different micro-organisms were made after addition of the solution of permanganate of lime.

The coli communis was the most sensitive to the action of the solution, one drachm being found sufficient to sterilize a litre of culture, requiring only half a minute to effect its influence, although the culture contained 80,000 colonies to the centimetre cube (20 drops). The other bacilli were similarly destroyed, but it took a longer time, from one to five minutes. M. Bordas made also comparative experiments with permanganate of potash and found that permanganate of lime was, at least, one hundred times more active. Med. Press.

Miscellany.

HONORS FOR DR. ROUX.

Dr. Roux, the inventor of the antidipththeritic serum, was on the 5th of July, accorded a grand reception at the Hotel de Ville by the scientists and municipality of Paris. In the course of the speech of the president he spoke of Dr. Roux's labors in the Pasteur laboratory, and stated that the result of the discovery had been that the mortality from diphtheria had fallen from 50 to 12 per cent. He also said that the demand for admission to Pasteur's laboratory for a course of study was so great that foreigners desiring to be admitted were obliged to send in their applications three or four years in advance.

ADOLESCENT FEVER.

According to Dr. Huchard, fever in the growing period of life is more frequent than is supposed, and depends on physical exertion in general. It is witnessed in children who are allowed at certain periods to indulge in exercises in disproportion to their strength; the result is a too rapid destruction of a too great quantity of matter, and the consequent imperfect elimination of the waste tissue.

Under these circumstances, the fever in the night, or the day following a long walk or a ride on the bicycle, after a game of football or lawn tennis, announces itself by pro-

found lassitude, sunken eyes, urine scanty and loaded with urates or phosphates, pain in certain groups of muscles, and wakefulness. Sometimes the exertion provokes congestion of the epiphysis and osteitis. When a child presents, therefore, attacks of fever, continued or irregular, without apparent cause, the limbs should be carefully examined, and the different points of the body where osseous congestion might be suspected, and if pressure on these points produced pain, absolute rest should be imposed, and the parts wrapped up in wet dressings covered with oil silk; this treatment, with a little calomel, will generally arrest the fever.—Med. Press.

TREATMENT ON SNAKE-BITE BY CALCIUM CHLORIDE.

Phisalix and Bertrand, at the Academie des Sciences (Sem. Med., June 19), report the result of experiments with chloride of calcium in cases of snake-bite. Its therapeutic action is not, as thought by Calmette, due to formation of some substance neutralizing the poison, nor to its entering the circulation and there destroying the poison as it would in a test tube, but depends simply on its local effect; it destroys the poison locally, and causes the tissues to slough, and so prevents absorption of the toxic material. Hence they conclude that the injections of calcium chloride must be made deeply at the actual spot where the fangs entered, and that they are useless if made in any other part.

The Governor of Pennsylvania has signed the following appropriation bills for Philadelphia institutions, passed by the Legislature during the session just closed: University of Pennsylvania, $200,000, and the hospital department of the same, $55,000; Jefferson Medical College Hospital, $112,000; Medico-Chirurgical Hospital, $150,000; Kensington Hospital for Women, $5000; Maternity Hospital, $5000; Memorial Hospital, Roxborough, $7000; Philadelphia Orthopedic Hospital, $5000; Philadelphia Lying-in Charity, $6000; Gynecean Hospital, $25,000; St. Christopher's Hospital for Children, $4000; Woman's Hospital, $8000; Rush Hospital for Consumptives, $10,000; German Hospital, $20,000; Philadelphia Home for Infants, $5000; also Homeopathic Medical and Surgical Hospital and Dispensary, $50,000; Children's Homeopathic Hospital, $8000; Hahnemann Medical College Hospital, $57,000. Outside of Philadelphia the following appropriations were also made: Columbia Hospital, $3000; Scranton West Side Hospital, $4000; Reading Hospital, $15,800; Reading Homeopathic Hospital, $10,000; South Bethlehem, St. Luke's Hospital, $20,000; Easton Hospital, $15,000; Conemaugh Valley Memorial Hospital, $10,000; Chester Hospital, $10,000; Scranton Lackawanna Hospital, $25,000; Lebanon, Good Samaritan Hospital, $6000; Pittston Hospital Association, $14,000; Carbondale Hospital Association, $12,000; Pottstown Hospital, $14,000; Pottsville Hospital, $10,000; Charity Hospital, Montgomery County, $9500; Lancaster General Hospital, $4000; Chester County Hospital, $6500; Jefferson County, Adrian Hospital Association, $10,000; Altoona Hospital, $12,000; Westmoreland Hospital at Greensburg, $6000; Wilkesbarre City Hospital, $25,000; Williamsport Hospital, $12,000; Pennsylvania State College, $212,000; Western University, $50,000.

THE TREATMENT OF GASTRIC ULCERATION.

A French physician, Fourrier by name, describes a method of treating ulcerative conditions of the stomach by introducing through a stomach tube two and a half or three drachms of subnitrate of bismuth, suspended in fifteen ounces of water. Before doing so any food or mucous is cleared out by washing with a solution of bicarbonate of soda. The bismuth and water is rapidly introduced and allowed to remain for ten minutes, the tube being removed. The bismuth is thus allowed time to deposit on the inflamed and ulcerated mucous membrane, and the water is then carefully withdrawn and

should come away clear, leaving the salt behind. Fourrier has had marked success with the method, especially in cases of chronic ulcerative gastritis from alcoholism and in gastric ulcer in chlorotic girls.—Med., T. and H. G.

ABORTIONISTS.

It has for long been believed that in the United States there is a regular system of abortions unequaled in its extent, perhaps, in any other country—with the possible exception of France. Some color has been given to this belief by an official inquiry which has recently been made in New York, and which has elicited revelations of a most surprising nature. For one thing it has been proved that there are at least two hundred professional abortionists who have hitherto been plying their trade in New York, with the cognizance of the police. It has even been asserted in evidence that they have been protected by the police for payment of blackmail, and that as an example of the tax which these guardians of the law have levied upon these criminals, one abortionist alone paid hush money to the amount of nearly three thousand dollars within a period of six weeks.—Med. T. and H. G.

THE BEGINNING OF STRUCTURAL DISEASE.

In the treatment of organic or structural diseases, as of the nervous system, the blood-vessels, and various vital organs, the fact is quite generally overlooked that the structural change is a consequence and not an actual disease. The real disease is the morbid process which has resulted in the tissue change. Nothing could be more unphilosophical than the limitation of the therapeutic efforts to such measures as may be supposed to be calculated to affect favorably the morbid structures. A rational mode of treatment must be based upon a recognition of the producing cause of the morbid changes which have taken place.

The researches of Bouchard and other modern investigators have thrown great light upon this subject, and have placed upon more than probable grounds the theory that the presence in the blood and tissues of various morbid substances of a toxic character, such as uric acid and various leucomaines and ptomaines, originating in the tissues as the result of imperfect oxidation or absorbed from the alimentary canal wherein they are produced by microbic action and morbid digestive processes, constitutes the real morbid entity in a large number of organic or structural maladies, especially those of the nervous system and kidneys.

In the treatment of these affections, it is, then, of the utmost importance that the physician should look carefully after the processes of digestion and respiration. These are the two great means by which the blood is to be purified. The exclusion from the dietary of poisonous substances and of such food substances as readily undergo putrefactive processes in the alimentary canal, and the introduction of an increased quantity of oxygen whereby the poisons resulting from morbid tissue changes may be destroyed by oxidation, constitute the most important measures for combating the onward march of an organic affection. Remedies of any sort, if aimed directly at the morbid tissue itself, will fail to accomplish anything more than temporary palliation, unless combined with measures which strike at the root of the disease. An ideal mode of treatment will necessarily include both classes of remedies.

Bacteriology and physiological chemistry are opening up for us almost daily new lines of thought, new methods of treatment and new possibilities of cure.—Modern Medicine.

CINNAMON FOR CANCER.

The Cincinnati Lancet-Clinic quotes from the Pacific Record as follows: J. Carne Ross, M. D., physician to the Ancoats Hospital, Manchester, communicates a letter to the Lancet of July 21, 1894, in which

he gives the results of some experiments he has undertaken on the above subject. Dr. Ross states that while carefully guarding himself from saying anything that would suggest that cinnamon should be regarded as a so-called specific in cancer, yet he has invariably found that where pain was present it ceased, that fetor disappeared, that the general health invariably improved after using the drug. The best results have, on the whole, been obtained where the tumor was cut off from the air by being situated either in the stomach, the rectum, the uterus or the mammae, where the superjacent skin and covering of the nipple were intact. Dr. Ross then gives particulars of five cases which were under the cinnamon treatment, in each of which marked improvement ensued. The preparation of cinnamon employed was a strong decoction, made by taking one pound of Ceylon sticks and boiling slowly in a closed vessel for eight hours in three pints of water till the water is reduced to one pint, pouring off without straining. The mixture should be shaken up before taking each dose; patient to drink half a pint every twenty-four hours, the half pint to be divided into such doses as best suit the patient.

A NEW METHOD OF TREATING THE CONGENITAL DISLOCATION OF THE HIP.

Mr. Arbuthnot Lane recently presented at the Clinical Society of London, two patients upon whom he had operated by a new method. This consisted in removing the head of the femur from its movable position on the dorsum ilii to a secure position below the anterior inferior spine of the ilium, to which it was sewn, with the result that the lordosis was lessened and the walking powers of the patient were increased to very little below the normal. The advantage will not be equally great when there is a double dislocation. The operation is not intended to supplant that of replacing the head of the bone.

BOLIVIA FOR CONSUMPTIVES.

The Consul General of Bolivia, in a letter to the newspapers, calls attention to the value of Bolivia as a residence for those who are of a consumptive tendency. He says that the air in the regions of La Paz, Sucre and Oruro is so highly rarefied and dry that it kills the bacilli, the length of time required depending upon the stage the disease has attained. Patients in the first or second stage would, he believes, be completely cured after a short sojourn, but those in the third stage would probably have to remain a few years. No medical treatment, he asserts, is required, the air being all that is necessary, although an almost complete abstinence from alcoholic drinks is essential. He further states that "if persons in the earlier stage of the complaint would go without delay they would, after a few months, be able to return completely restored to health. Numerous persons suffering from consumption are annually sent to Italy, etc., where a cure is generally hopeless, whereas if they would only undertake the longer journey to Bolivia they would, in most cases, regain their health."—Med. T. and H. G.

URICEDIN.

Uricedin is composed of citrate of potash, sulphate of soda, chloride of sodium and citrate of lithium. It is a white and granular substance, soluble in water. It is efficacious in the treatment of the uric acid diathesis, and may be given in large doses —up to 300 grains daily.

HORSE MEAT TEST.

The Medical Record's correspondent from Paris says that horse bouillon can be distinguished from that made of beef or mutton by means of iodine. The horse bouillon colors reaction paper red-brown, shading toward violet. This should be regarded as valuable information by those who object to eating horse flesh.

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REMARKS ON FRACTURES OF THE SKULL*

BY CHARLES W. DULLES, M. D.

I desire to call the attention of the Academy of Surgery to some points in regard to fractures of the skull which I believe do not receive in this country, or anywhere except in Germany and Russia, the attention which they deserve. I mean the mechanism of indirect fractures. This has much more than a purely scientific interest; it may be an important factor in our application of the art of surgery as well. It is now eight years since I read before the College of Physicians (Trans. Coll. of Phys. of Philadelphia, 1886) a paper, to the preparation of which I had devoted a great deal of time and labor, and in which was expounded the theory known as the "bursting theory," of indirect fractures. This paper has—so far as I know—never been noticed in any way on this side of the Atlantic. I refer to it, because I would like to make it the authority for certain statements which I make here and which are there supported by argument and demonstrations.

The bursting theory of indirect fractures of the skull may be invoked to clear up many difficulties of diagnosis in fractures of the skull, and I believe that it should invariably be invoked before conclusions of a medico-legal character are reached.

I have seen more than one case under the care of the Coroner of Philadelphia in which I found a fracture precisely where I thought it should be, even after the Coroner's physician had examined the skull and concluded that there was no fracture at all. I have also seen cases in the living in which the application of the "bursting theory" has furnished very instructive suggestions in regard to the diagnosis of accidents to the skull, making them much clearer and the treatment much more satisfactory. An appreciation of the bursting theory also often clears up the perplexities of cases in which, without detectable fracture of the skull, there is found a rupture of bloodvessels and hemorrhage within the cavity of the skull, either extra or intra-dural.

Briefly stated, the bursting theory may be outlined as follows: The skull is a hollow case, of a somewhat ellipsoid form, the wall of which is formed of bone, varying in thickness and density in different parts, and of a peculiar conformation, and with peculiar contents and coverings. When such a case is struck, or when it strikes upon a resisting body, it is compressed in a direction in the line of the force and counter-pressure (which latter may depend wholly on vis inertiae). The result of this compression is to shorten the prime diameter, and of necessity to lengthen the transverse diameters. As illustrating the first phase of action, Sir Charles Bell, in the early part of this century, made an experiment (which is easy to repeat), in which he placed movable balls inside and outside of a hoop and touching it, and found that a blow upon any part of the hoop caused the ball immediately under it and that immediately opposite it to move toward the centre of the hoop, while those distant ninety degrees from it moved away from the hoop.

*Read before the Academy of Surgery, June 3, 1895.

If this experiment were to be modified, so as to meet the conditions of a hollow sphere instead of a circle, we might place half of a hollow sphere upon a resisting surface, and striking it on the upper pole would find that this pole would approach the resisting surface and the circumference would be elongated and describe a larger circle. In such an experiment, made upon an elastic substance, the compression and elongation would be followed by a corresponding expansion and shortening The first compression and elongation spoken of are of the chief importance in indirect fractures of the skull, and in them we have (to use a simple illustration) conditions similar to those when an umbrella is raised. In the latter case it is plainly seen what takes place, namely, that, as the pole is brought nearer to the equator, this is elongated and the space between the meridians (the ribs of the umbrella) is increased. This increase being expected and provided for by material which lies in folds between the meridians, this is simply spread out. In a body with no such provision, however, any force that would bring its poles near together, and consequently lengthen its equatorial circumference and separate its meridians, would at once set up a struggle between the force applied and the cohesion of the particles lying along and between the meridians. If the power of cohesion were sufficient, there would be no disruption; if, however, it were not, then there would be a split beginning at some point near the equator, where the strain is most severe, and passing in opposite directions toward the poles. This is what would take place in a perfectly symmetrical homogeneous elastic body. What naturally takes place in the skull is shown by observation and experiment to be this, modified by the peculiar structure, formation, contents and surroundings of the skull.

This is what is known as the "bursting theory," and its bearing upon practice will be appreciated, I think, by those who apply it. It provides the surgeon—not with certainty of diagnosis, but with suggestions of probability, which will increase his chances of makng a reliable diagnosis. The inferences from it, which are of a practical nature, are as follows: Force applied to the skull, of sufficient violence and rapidity of action, will produce what is known as a direct fracture—a fracture at a point where the violence was applied. In these cases the rapidity of action is a very important element, as it is a well-known fact in physics that time enables cohesion to resist a disruptive violence, which, if instantaneously applied, would at once overcome cohesion. Force less sudden and less extreme applied to the skull will bring actively into play the elastic properties of the skull, and if violent enough will lead to a fissure at some distance from the point at which the violence was applied, and usually in a line meridional to the point where the force was applied. My study of a large number of accidental and experimental fissures indicates that blows upon the forehead directly in the middle line are likely to produce a fissure of the skull, passing from front to back in or near the middle line, and more frequently at the base of the skull than in the vault. Blows applied to the forehead on one side or the other are likely to produce fissures in a line with the direction of the force, and crossing the skull to the other side. Such fissures occur almost always in the base, and they usually terminate in the middle cerebral fossa, though they sometimes cross the foramen magnum and traverse the cerebellar and posterior cerebral fossae. Force applied to the middle of the occiput usually produces a fissure, passing in the direction of the force around the occiput, laterally or perpendicularly, sometimes separating the lamboid suture, sometimes splitting the lower part of the occipital bone and going into the foramen magnum, and sometimes crossing the petrous bone, breaking it transversely and passing into the foramen lacerum medius. Such fissures may pass straight down to the foramen magnum and (crossing over) split the body of the sphenoid bone and extend into the ethmoid or frontal bone. (Such fissures furnish typi-

cal illustrations of the correctness of the bursting theory). Force applied to the side of the head, in almost all cases, produces a fissure passing through the base of the skull in the middle cerebral fossa. Such a fissure sometimes traverses this fossa completely and may pass completely through the base and vault, dividing the skull into two halves. In some cases the fissure passes directly through the coronal suture; in many cases it splits the petrous bone longitudinally. In some cases force applied to the side of the head causes a splitting off of the posterior clinoid processes—an occurrence that is explicable only upon the supposition that the tentorium cerebelli, which is attached here and to the occipital bone, is put upon the stretch when the skull is elongated antero-posterially and drags these portions from the body of the sphenoid. Force applied to the side of the head frequently produces fissures passing around the side of the head, through the parietal and squamous bones, and often passing to the basi-sphenoid, but rarely dividing it completely. In some cases force applied directly to the vertex produces a fissure in the long axis of the skull. Such a fissure may be of very great extent and may even divide a skull into two symmetrical halves. Longitudinal (antero-posterior) fissures occur more frequently in the base of the skull than in the vault.

An interesting form of violence, applied to the skull, is that due to falls upon the feet, where the momentum of the body is suddenly arrested by the resistance of the earth. In such a case a ring of bone surrounding the condyles may be driven into the skull, or—as observation and experiment show—the process of the sphenoid bearing the posterior clinoid processes may be broken off by the pull of the tentorium cerebelli, when momentum and resistance lessen the diameter from condyles to vertex and lengthen the diameter from occiput to sinciput.

I state my views in reference to this matter somewhat authoritatively, because I have sudied it pretty thoroughly for ten years, and because these views agree, I think, with those of the most careful students of the subject in recent years. They have also been confirmed by a considerable number of personal observations. They have an important bearing upon surgical practice and also upon medico-legal questions. For example, in 1886 I saw a Coroner's case of a person who had fallen down some stairs, striking the head near the external occipital protuberance, in which, after the skull had been opened and the brain removed, no fracture was found by the Coroner's physician, and none would have been found had he not been asked to remove the dura and to look along a line suggested by an application of the bursting theory, where a fissure was found passing down through the occipital bone and into the jugular foramen.

My investigations show in over 90 per cent. of all cases fissures that correspond to what might be expected from an application of the principles of the "bursting theory." This result seems to establish the theory by the best test that we can apply to it; so that it appears to rest upon a very firm tripod of reasoning, experiment and clinical observation.

I do not overlook the fact that there are fractures that cannot be accounted for by it. There are some fractures in which the force applied is so great and acts in such a manner that the skull is crushed so as to hide any evidence of the play of its elastic properties, the fracture being of a comminuted sort; and there are others in which one segment of the skull seems to be shoved over the other by forces of pressure and counter-pressure which require some study before their mode of operation can be understood. For this reason it is of importance to learn in every case the position which the skull has held in relation to the spinal column or to any body capable of exerting counter-pressure. No less is it important not to overlook the counter-pressure that is caused by the simple vis inertiae of the skull and its contents.

But it would be impossible to speak of all the influences that may modify the strict application of any

one theory in regard to fractures of the skull; and I must close with the expression of my own conviction that the supreme law governing the production of indirect fractures is that which depends upon the fact that the skull is practically a hollow elastic case approximately oval in shape, and which may be briefly formulated as follows: When a sufficient force is applied to any curvilinear part of the skull, if this part do not give way immediately, the axis of the skull lying in the same line as that of the applied force is shortened, and all the axes lying in planes at right angles to this line are correspondingly lengthened, with a proportional lengthening of their circumferences and separation of their meridians, so that the direct depressing force is converted into an indirect disruptive force acting at right angles to the drection of the former. The effect is to produce a fissure or fissures, which will have a general meridional direction.

The application of this law is subject to certain modifications due to the anatomical and architectonic peculiarities of the skull, its coverings and contents, and to certain exceptions due to the amount and velocity of the force applied as well as to the coming into play of peculiar counterforces.

CROUPOUS PNEUMONIA.*

The case illustrates a clinical type with which one should become perfectly familiar, as it is unusually typical of the disease with which it is connected—so much so that, after seeing a few such specimens, one will often be able to pick out a case without making a physical examination.

The patient is 25 years old, a Swede, by occupation a laborer, unmarried. The family history is negative except that his father died of consumption. The patient has no alcoholic nor specific history, and he was strong till three years ago when he had the grippe, which confined him to bed for a week. Eight days ago he took cold, but did not pay much attention to it and continued to work throughout the rest of the week, that is from Tuesday to Saturday inclusive. Sunday morning he got up at half-past eight, but returned to bed at eleven. Asking him why he did not remain up, he says: "Sunday, I freeze." This is plain; he had a chill. On further questioning we learn that he did not shake with cold, but that he had a sense of freezing about the lower part of the chest most of the time from Tuesday till Sunday. On Sunday afternoon he developed a sharp pain in the right side, and that same evening he was admitted to the hospital with a pulse of 120, temperature of 104 degrees, and his respirations were 38 to the minute.

Commonly, at this stage of the disease, the pain is agonizing, the patient is unable to take a deep breath and the respiration being superficial, is necessarily rapid. The respiration is, generally speaking, more rapid in this disease than in any other, being often half or more than half as rapid as the pulse. Here, with a pulse rate of 120, the respirations were 38; when the pulse fell to 110, the respirations were 40. The patient says that he felt an inclination to cough, not on account of the pain in his chest. The temperature to-day was 102 degrees, and last night it was 103 degrees.

The sputum is also quite characteristic. You can see that it is of a dull reddish-brown color and of the consistence of glue, stringing from the cup and receding without breaking when I attempt to stop the flow by tilting the cup. Such sputum is typically so tenacious that it will stick to the bottom of an inverted cup. This test, I am unable to show you, since we always keep some antiseptic liquid in the sputum cups.

We have had this winter in Buffalo an epidemic of influenza, comparatively mild, when we consider the severity of the epidemic in the winter of 1889-90, but not so mild as many of the patients might wish. The papers are full of the occurrence of grippe elsewhere. I believe that this patient had an attack of grippe

* Abstract from Medical and Surgical Reporter, Charles Cary, M. D., Buffalo, N. Y.

last week. Grippe is often followed by pneumonia unless the patient takes to his bed and receives proper treatment. The pneumococcus is almost always present in the mouth and it is largely a question of accident whether it remains as a harmless foreign body or whether it becomes implanted on the soil furnished by the inflammatory process of the influenza.

On percussing over the chest there is a great difference between the two sides. On the right side, the note is high-pitched, rather tympanitic and not voluminous. On the left side, the heart interferes with the resonance of the lung tissue so that the comparative difference is not as great as we might expect. There is not as much fremitus over the right lung as over the left. This is not typical, but we must take the physical signs as we find them. Sometimes, on account of pain, the diseased side will be held much more fixed than the other. Sometimes breathing with the diaphragm is less painful than if the intercostal and abdominal muscles are used, and, hence, the respiratory movement will be almost entirely limited to the diaphragm. This patient's respiration is largely abdominal, the chest scarcely rising at all. Over the lower lobe of the right lung there is loud tubular breathing, accompanied by a rather coarse rale, which is, however, of the nature of a crepitant rale. Day by day there will be a diminution in the tubular element of the breath sound. It is less to-day than yesterday. Still, we must consider the possibility of the invasion of another part of the lung, and, if this occurs—I sincerely hope that it will not—you can hear the pneumonic process in its most recent stage. The right lung is recovering so rapidly now that I think the man would be able to withstand the invasion of another part of the lung, even an entire lobe, if it were delayed a few days.

The general aspect of the patient shows that he is suffering from a serious infectious disease. Notice the characteristic nasal respiration, the alae nasi working with each respiration, showing that a state of partial suffocation exists.

You will observe that the patient has been cupped, the ecchymotic spots appearing conspicuously, but not interfering with the conductivity of the sounds of the lung. I believe that derivative treatment, in the general sense of the word, is excellent. In addition to the use of dry cups, some other milder counter-irritant may be used, and mustard is a good and simple remedy. The bowels should be kept open by salines or a mercurial. It is common practice to give some ammonium preparation with the idea of making the sputum less viscid and capable of expulsion. I believe that opiates are indicated in this disease; not to a degree sufficient to narcotize and render the patient insensible of the need of oxygen, but sufficient to prevent the irritation of the centres on account of the pulmonary inflammation. We should, in general, prevent the excessive working of an inflamed organ. We would protect, involuntarily, any external organ that was involved in an acute inflammation, and I believe it is rational to limit as much as possible the working of the heart or respiratory apparatus under similar conditions of disability.

OXALIC ACID AS AN EMMENAGOGUE.

The emmenagogic effects of oxalic acid given in doses amounting to two grammes a day are very marked; but its disagreeable taste is a disadvantage. It may be made more acceptable thus:

Oxalic acid	2	grammes
Neutral glycerine	40	"
Syrup aurantii	60	"
Water	400	"

One-quarter of a glass every hour.

—Occidental Medical Times.

SULPHANILIC ACID IN ACUTE CATARRH.

Thirty to sixty grains of sulphanilic acid, combined with a somewhat smaller amount of bicarbonate of soda, dissolved in water, may be given once or twice daily. The remedy is said to be rapid and efficacious in its action.

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PHILADELPHIA, AUGUST 24, 1895.

DRY DRESSINGS.

We have formerly adverted to the ever-changing method employed in modern times in wound-treatment.

We remember the time when it was taught that for the covering of fresh wounds no balm was more efficient than one's own blood. The humble folk in sequestered sections of the country, beyond reach of medical aid or indisposed to pay for it, when a part was so wounded as to bleed freely hastened to some obscure corner of the domicile for cobwebs, which were believed to possess the dual power of hemostasis and healing.

During our late war we well remember the industry of the mothers and friends of soldiers in preparing charpie.

This dry-dressing was supposed to possess almost specific powers in healing wounds. Manufactured lints came later. With antiseptics and Chassiagnac's drainage-tube desiccated dressings were cast aside for irrigation, soaked gauze and frequent ablutions.

The quantity of water employed in all operations was enormous, and everything about was deluged with the incessant torrent. Now, a reaction has set in, and we are going back to the dry-dressings. This is no doubt a move in the right direction. It possesses many great advantages over the moist in healthy minds. Our patients are not exposed to the chilling effect of wet towels. There is a vast economy of materials, which is an important item when many operations are performed. Dry gauze is a most excellent hemostatic, and an absorbent of great value. In a large number of aseptic wounds, quite regardless of this area, skilfully and generously applied with one dressing only, we may not be obliged to remove it until repair is quite complete.

With infected wounds or those the seat of severe pain, simple or medicated fluids may be needed; when the virtues of hydropathy should be utilized according to well-known therapeutic principles.

ENDOMETRITIS.

Winckel (Wiener med. Woch., No. 27, 1895) discussed this disease at the June meeting of the German Gynecological Congress. Simple uterine catarrh usually results from distinct venous congestion. It frequently arises from this cause during infancy from improper clothing, especially tight bandaging of the body. Catarrh may also arise in childhood from want of cleanliness, irritation of the vulva and entrance of worms into the vagina. Anemia and other diseases of the blood cause catarrh in childhood. In adult life the causes of the same disease are innumerable. After bad burns, hemorrhagic endometritis is frequent. In acute infectious diseases this disease may arise either from entrance of the specific germ into the endometrium or from irritation of that membrane due to chemical products evolv-

ed by the germ. Endometritis decidualis polyposa results from retained relics of decidua after abortion and premature labor. In endometritis exfoliativa there is never any infiltration, as has been asserted. Between the shedding of one membrane and the development of the next there may not be the least trace of any discharge. Tuberculous endometritis is rare, the tube being more commonly the seat of tuberculous disease when it attacks the female genitals. Gonorrheal endometritis is very frequent, and Winckel contends that the gonococcus travels not only along the endometrium to the tubes, but also through the uterine wall to the peritoneum. Recent literature records no instance of true diphtheritic endometritis. The well-known septic puerperal type is chiefly set up by streptococcus pyogenes aureus. Purulent senile endometritis is saprophytic.

THE COMPLICATIONS OF VACCINATION.

Except in the thing which the anti-vaccinationist calls his "mind," the influence of vaccination in preventing or modifying small-pox is beyond a doubt; whether the present generation is wise in making use of it is a matter on which there may be more than one opinion. Looking upon the differences between small-pox now and small-pox one hundred years ago, and placing improvements in sanitation in their proper places, no one can deny that vaccination has deprived a loathsome disease of much of its horror. Personally, we look upon vaccination as the best means we have of fighting small-pox, and as a means which we should consequently make use of until we can discover a better. The supporters of both sides of the argument would do well to read a very excellent and complete study of the complications of vaccination by Dr. Louis Frank, of Milwaukee, which appeared in the Journal of Cutaneous and Genito-Urinary Diseases, for April, 1895. The conclusions at which Dr. Frank arrives are as follows, and we have in some measure tabulated them for the sake of brevity and clearness: 1. That a study of ordinary anti-vaccinationist literature would lead one to think that leprosy, syphilis and paralysis are the only complications, whereas, as established by careful and unbiased observers, they occupy a most modest place in the list. 2. That the complications of vaccination are: (a) Those due to the virus itself, (b) those due to mixed inoculation, and (c) the sequalae of vaccination. Under the first heading come nine different eruptions, including dermatitis, vaccina herpetica, erythema and urticaria; none of these are particularly serious. 3. Of the complications due to mixed inoculation, the most common is erysipelas, while the most serious and most rare are tuberculosis, leprosy and syphilis. That the anti-vaccinationists make most noise over these particular affections and consider them to be relatively frequent. 4. Of tuberculosis communicated by vaccination, only three cases are on record, and these are of doubtful value. 5. With regard to leprosy, it is not to be denied that such inoculation may be possible, but it may be said that we have, at present, no clear and indisputable facts proving that leprosy has been spread by means of vaccination, but it is clearly established that it is effected by transference from the vaccinee to the vaccinifer, or from one vaccinee to another. Syphilis is never conveyed into the genus bovinum, consequently, it cannot affect the lymph from that class of animal. 7. The complications of vaccination are due to the use of human lymph, or to the use of impure lymph, or to imperfect methods of vaccination. If pure animal lymph and vaccine be used with care, no complications need arise; certainly, it is absolutely possible to prevent all serious ones.

TRIONAL AS A HYPNOTIC IN CHILDREN.

Trional is recommended as a safe and useful drug for the "night terrors" and sleeplessness of children.

Surgery.

IN CHARGE OF

DR. T. H. MANLEY, New York.

METALLIC SUTURES IN FRACTURE OF THE PATELLA.

In an article read before the Ontario Medical Association. Dr. J. J. Cassidy, described the following method of introducing the wire sutures in the operation for fractured patella: After the holes are drilled opposite each other in the fragments of the patella the silver wire is pushed down through one hole in the upper piece, and a flexible aluminum probe, with an eye in its point, is pushed through the opposite hole in the lower piece. When the silver wire appears in the gap between the two pieces it is caught in the eye of the probe, deftly twisted, and the probe is then drawn back through the hole in the lower piece, carrying the suture with it. If there should be any difficulty in pushing the silver wire through the hole in the upper fragment, it may be attached to the eye of the probe and pushed down to the gap, the probe is then detached from the wire, drawn back through the opening in the upper piece, introduced through the hole in the lower piece, reattached to the wire, and the operation finished as in the first instance.—Dominion Med. Monthly, June, 1895.

THE ILIAC-OVARIAN LIGAMENT.

M. Durant contributes an important and practical essay on this anatomical structure.—Le Progres Medical, 6 Juillet, '95. The ovary is attached to its posterior surface. It has been variously described, the author says, namely, by Henle, the "infundibulo pelviere;" Rouget, the round superior ligaments; Claudo, the appendiculo ovarian. According to Rouget it containsget it contains muscular fibres, and hence plays an important physiological role.

Hasse regarded it as a reduplicature of the peritoneum, which united with the pavillion of the tube, externally with the ovary, and posteriorally with the abdominal wall. Its direction is nearly transverse. Schultze gives it a similar description, and says it takes a direction backward from the symphysis to the sacro-iliac junction. Rouget regarded it as a anusculo-membrancus cord, represented in the mammalia as a large, round ligament. It exists in both sexes; in the male as the urea envelope of the testes about to descend. In its descent is carried with it the vessels and elements of the cord.

It maintains throughout life intimate relations with the cecum and the structures of the spermatic cord, and hence is of considerable pathological importance in various types of inguinal hernia.

VISUAL TROUBLES FROM EMPYEMA OF THE FRONTAL-SINUS.

An empyema of the frontal-sinus attended with a bulging backward and downward of the orbital plate may be attended with unusual difficulties of diagnosis. If catheterism through the nares is practicable the way is easily cleared. This maneuver is extremely difficult in the normal state, but is more simple and effective when the sinus is distended.

Empyema of the frontal-sinus is sometimes a very serious lesion. Amaurosis and amblyopia are present in certain cases when the pus takes a backward direction and presses on the optic nerve as it enters the orbit. Pain is constant, the vesical field is narrowed and the disturbances of all the occular functions are extreme. In all these cases we should first endeavor to drain through the nose by tubage; if this fails, then we must trephine, though we should avoid this if possible, as it leaves a scar.—G. G. Martin, Annales de Med., 4 Juillet, '95.

INFLUENCE OF AGE AND SEX ON THE ABSORPTION OF CERTAIN MEDICAMENTS BY THE STOMACH.

All our physiologists have made their deductions from observations on the male in connection with the above question. It is interesting, however, to know what impress age, the menstrual epoch, pregnancy and menopause produce. One author made the observation in the hospital of Zemsvo, of Icheinighoff, with the assistance of Professor Ichvadowski. They examined none but those in health. Seventy-three females were subject to the tests; 49 were examined with regard to the influence of age on resorption; 16, the effect of pregnancy, and 8, the influence of menstruation. The medicaments used were salicylate of soda and iodide of potash.

They observed that absorption was most rapid in early childhood, and was most slackened in old age; it is variable during menstruation. Towards the end of menstruation the rapidity of absorption diminishes, then it increases and reaches its maximum just before the menstrual epoch. With the pregnant absorption was more rapid than in the non-pregnant.

The age of the pregnant and rapidity of resorption present was in inverse ratio. As pregnancy advances resorption is more accentuated. With the multipara resorption is greater than principara.—Taragola.

ON THE NATURE OF SYPHILITIC STRICTURES OF THE RECTUM.

BY M. M. HARTMANN, et Foupet.

The pathology of syphilitic contraction of the rectum is yet very obscure.

M. Fournier sustains the theory that there is an interstitial hyperplasia with a fibrous degeneration, while M. Duplay says that, however, we may view syphilis when it attacks the rectum it can be regarded as only playing an indirect role, as the contractions are always inflammatory, dependent on multiple influences in which no doubt syphilis occupies a prominent position.

These authors present a series of 21 cases; one by Juliusberger and two by Poelcheer, and while they allow syphilis a place as one of the etiological factors, tuberculosis is very often co-existent. Histologically, they always found at the lower border of the structure a change in the epithelium, which became puerile and stratified, with irregular papillomatous bodies, with a true pachyderma of the rectum.

Under the epithelial layer are diffused inflammatory lesions, tubercles, endarteritis or syphilitic periphlebitis.

The syphilitic infection keeps up a chronically inflamed surface through which the elements of infection readily pass, and this maintains a stenosed state of the bowels.

NEURALGIA OF THE POSTERIOR ROOT OF THE EIGHTH CERVICAL NERVE (INTRARACHIDIAN) OF THIS AND OTHERS IN CONTIGUITY—OPERATIVE AND FUNCTIONAL CURE.

BY M. M. CHIPAULT, et Dumonlin.
(Ann. de Med.)

A bank clerk aged 34 years commenced to have violent spasms of pain along the internal border of the middle and little fingers. Pain was always aggravated by contact with anything.

It resisted all ordinary treatment. From January until June he was unable to use his hand without pain.

Elongation of the dorsal branch of the cutaneous nerve, with section of the ulnar, in the epitrochlear grove, led to no improvement. The young man then in despair turned to morphine, in large doses, for relief. He came under the author's care in August, 1894. He was then pale, emaciated and weak. His thumb was flexed, as was also the forearm and ring-finger.

The muscles on the antero-lateral part of the forearm were marked by atrophy.

Now, after a careful examination, it was decided that the seat of trouble was at the root of the eighth cer-

vical. Accordingly the spine was trephined at the suspected site and the nerve root resected. (It is not stated whether an exostosis, a neoplasm or thickening of the nerve sheath was found.) Enough was recovered to insure anesthesia over the seat of neuralgia.

After operation there was no shock or vomiting. He could now hold a glass of water, write or move all his fingers without pain.

Four months after recovery was so complete that he could perform all his duties at the bank without inconvenience. His general health had immensely improved, and he had gained 48 pounds in weight.

This patient, then, did not suffer from neuralgia of the nerve, but a pseudo-neuralgia, radical in origin, as was evident from the delimitation of the hyperesthesic zone. The pathology of the pseudo-neuralgia, in the absence of all radicalism or medullary lesions, is difficult to determine.

NOTE BY TRANSLATOR.

This case is one of a highly interesting group, by no means rare, presenting neural phenomena with serious disturbances of the general health. They are invariably unilateral, only occur in the adult, very rare in the female, commonly associated with marked vascular disturbances; attacks are spasmodic, sometimes violent; some phases said to be cephalo-focal from the symptoms: Seldom or never attacks the lower extremities; the pathologic bases, probably, essentially the same as tic-douloureux. Modern surgery has essayed the radical cure of these dreadful neuralgias by peripheral or central neurectomies, sometimes with excellent results, though often amelioration is but transient; probably when combined with change of environment or occupation and a thorough course of internal medication a cure will never probably succeed.—T. H. M.

CASTRATION FOR HYSTERIA.

Gilles de la Tourette (Archives de Tocol. et de Gynec., June, 1895) strongly opposes the practice of removing the ovaries for hysteria. The modern idea that the ovary is the seat of that neurosis is as silly and mischievous as the ancient theory that hysteria arose from the womb. Clitoridectomy was odious and unscientific, but did not kill. 1872 was an evil year. Hegar and Battey both performed oophorectomy for hysterical dysmenorrhoea; Battey's case recovered. Hegar's patient dying "headed the long martyrology of hysterical patients condemned to castration and later to hysterectomy." Charcot especially condemns this unscientific and dangerous operation. He categorically denies the existence of a "genital hysteria;" he even declares that there is no such thing as hysteria, hystero-epilepsy or epilepsy, "of menstrual origin." The catamenia are deranged as a result of the neurosis which they cannot cause. He has never seen a case where the operation could be justified. He has seen many where it had been performed, and the women remained hysterical as before. They had the extra worry caused by knowing that they had lost their ovaries which they could never get back again. Castration for hysteria in the female is as unjustifiable as it would be in the rare cases where hysteria with pain in the testes and scrotum exists in men.

OPERATIONS FOR CANCER.

Dr. Roux, of Lausanne, discussing this subject, remarks that the former teaching concerning constitutional cancer, the absence of antisepsis, and the fear of relapse discouraged the most intrepid surgeons from attempting on malignant tumors any but insignificant and palliative operations. From the characteristics of cancer he admits that it is a parasitic disease resembling tuberculosis in its clinical evolution; it is necessary, therefore, to attack it with the same energy and promptness as the latter affection. Too often we operate too late, when it is impossible to prevent a relapse. This fact filled the earlier statistics and continues to darken the present ones. As soon as the diagnosis is assured we should

intervene by the bloody method, always making a systematic and carefully detailed toilet of the ganglionic chain, even if it is healthy in appearance. That the principal cause of relapse is the late period at which we operate is proven by his personal observations upon three groups of cancer cases: those of the breast, the uterus and the gastro-intestinal tube. The operable cases of cancer of the stomach reached 12 per cent.; those inoperable, 88 per cent., a part of which were susceptible of palliative operation. The mortality from pylorectomy for cancer was from one-fifth to one-seventh; that from gastro-enterostomy, one-seventh. For cancer of the uterus there was 68 per cent. of the cases inoperable and 32 per cent. operable, only one-fourth of which were operable by the sacral method. The mortality from vaginal hysterectomy was 8 per cent., and from sacral hysterectomy, 11 per cent. As regards cancer of the breast, for which intervention is most easy, he counts twelve absolutely inoperable cases, while in more than 50 per cent. of the cases it was possible to predict an early and fatal relapse. The mortality reached 5 per cent.—that is to say, it was equivalent to the general mortality of all the operations. There is no doubt that early operations will prevent relapses, since in the deplorable conditions under which we now operate we actually have some cures. He cited at hazard cases of gastro-intestinal cancer without apparent relapse for three years; cancers of the rectum without relapse after four years; a cancer of the uterus, which had invaded the vesical walls; a villous cancer of the kidney of extraordinarily difficult extirpation and without relapse for five years. He had removed the tongue in a case that had relapsed nine years after an operation performed by Dr. Kocher. Among his cases was one of survival for eleven years from cancerous goitre, and a cancer of the testicle that had not relapsed at the end of twelve years. Histological examination had left no doubt as to the nature of these tumors.—Semaine Med.

Medicine.

IN CHARGE OF

Dr. E. W. BING, Chester, Pa.

ACUTE CORYZA IN NURSLINGS.

It is not often that the acute rhinitis which nurslings occasionally suffer from, both in summer heat and winter cold, requires treatment; sometimes, however, it may, to some extent, prevent suckling, and remedial measures are required. Lewy, in such cases, advises the administration of terpin hydrate in doses of five centigrammes for children under one year, and double that amount for those above that age. For the prevention of eczema of the upper lip from the alkaline nasal mucous, vaseline, with which a little boric acid has been incorporated, should be used freely. When, as may happen, nasal obstruction from swelling of the nasal mucous membrane is so severe as to prevent nursing, it can be reduced either by swabbing with a five per cent. solution of cocaine, which requires constant attention, or by introducing into the nostrils cotton-wood cylinders dipped in one per cent. cocaine solution. In our own practice, however, we should not care to risk the use of cocaine with infants. In purulent rhinitis Lewy irrigates the nose with tepid water and insufflates with a powder containing one part of nitrate of silver to 20 of powdered talc or zinc stearate.—Med., T. and H. G.

A SIMPLE EXPEDIENT FOR THE TREATMENT OF NOCTURNAL ENURESIS.

Stumpf, in the Munchener Med. Wochenschrift for June 11, gives an account of a simple and apparently rational expedient which he has successfully adopted in the treatment of nocturnal enuresis, especially in older children. He was led to try it on the basis of the fact that the passage of even a few drops of urine through the sphincter vesice excites the action of the detrusor to such an extent that the call to urinate

becomes almost imperative. It is well known how difficult it is to restrain the act of urination after even a small amount of urine has passed the sphincter vesice and entered the urethra. His theory is that during sleep the sphincter of the bladder is apt to become relaxed, so that, as the child lies horizontally in bed, a little urine passes the sphincter and enters the deep urethra. The irritation of this urine causes at once strong reflex action of the detrusor, and the bladder at once emptied in a full, strong stream. It is a well-known fact that in nocturnal enuresis in children the urine does not leak away gradually, but the bladder is emptied at once, a point which is in support of this theory.

In order to prevent the passage of the urine into the urethra, when the sphincter becomes relaxed during sleep, a simple expedient is adopted, namely, the elevation of the pelvis, so that an accumulation of urine of ordinary amount in the bladder will gravitate back and distend the fundus, and not press against and tend to pass the sphincter. The elevation is secured by allowing the child only a single, small, flat pillow under the head, and placing one or two ordinary pillows under the thighs so that they lie at an angle of 130 to 150 degrees with the horizontal spine.

This simple expedient was entirely successful in curing two inveterate cases, one of a boy nine years, and one of a girl fifteen years old. It was then tried in twelve cases and was uniformly successful. It was usually necessary to continue the treatment for three weeks, after which time the children were able to return to their former sleeping position without relapsing.

THYROID TREATMENT OF GOITRE.

Professor Kocher, of Bern, has communicated to the Correspondenzblatt fur Schweizer Aerzte his experience of the treatment of goitre by means of thyroid administration. The effect is unmistakable, he says, the swellings becoming distinctly smaller. Symptoms of suffocation may be abolished by the treatment in consequence of the diminution in size of the goitre, but in no case did the swelling entirely disappear. Only in three cases was the treatment unsuccessful, and one of these was that of a large goitre in which success could scarcely be looked for; but in spite of this success Professor Kocher utters a warning against too sanguine views as to the success of thyroid treatment of goitre and expresses the opinion that this mode of treatment is not more efficacious than that by iodine. Success is only to be expected if the treatment is undertaken at the right time and is carried out with energy and patience.—Lancet.

EARLY DIAGNOSIS OF DIABETES.

Von Noorden (Centralbl. f. inn. Med., May 25, 1895) draws attention to the early diagnosis of diabetes since treatment in the early stages offers considerable hopes of recovery. Treatment should be begun before the diagnosis is made by the discovery of sugar in the urine. The author has investigated the diagnostic value of alimentary glycosuria in such cases. In 15 adipose individuals no trace of sugar could be found when food containing much carbohydrate material was administered, but when pure grape sugar was taken glycosuria was noted in four cases. Two of these four cases have since developed diabetes, and the two other cases have not been under observation long enough. If subsequent investigation confirms these observations the test with grape sugar will be of considerable diagnostic value. It should be tried in the adipose and gouty, especially when a family history of diabetes is present. The author looks upon adiposity as frequently an early symptom of diabetes.

PAROXYSMAL HAEMOGLOBINURIA.

Chauffard, at the Societe Medicale des Hopitaux (Sem. Med., June 19), related a case of paroxysmal haemo-

globinuria from cold. Ehrlich's experiment was repeated, that is, blood was examined from the two hands, one having been exposed to the air, the other tightly ligatured at the wrist and exposed to iced water fifteen minutes. In the latter the serum was a pinkish cherry color, while in the former it was yellow. The clot did not redissolve in either case, as it should do in an attack of haemoglobinuria. This is explained by supposing that a central nervous disturbance is required in addition to exposure to cold for the production of a typical attack. The relation to the nervous system was shown by this case, for the exposure of the hand isolated by ligature to intense cold produced all the prodromal symptoms and premonitory albuminuria of a general attack. The mode of action and the path taken by the nervous reflex are uncertain, but that some nervous reflex is the starting point of the chemical process which results in an attack of haemoglobinuria seems clear.

BILIARY CIRRHOSIS IN CHILDREN.

Gilbert and Fournier (Rev. des Mal. de l'Enf., July, 1895) report seven cases of biliary cirrhosis in children, or commencing in childhood, and presenting all the symptoms observed in the adult, but with the addition, in many cases, of hypertrophy of the spleen, so conspicuous that in those cases in which the liver is not very much enlarged—and such enlargement is in children often not great—the true nature of the disorder may be easily mistaken. They believe this enlargement of the spleen in association with biliary cirrhosis to be peculiar to cases commencing in childhood. A further peculiarity of the disease, as observed in children, is the frequency with which clubbing of the fingers may be observed. In some instances the ends of the femur and tibia were enlarged also. Evidence of the influence of the disease on the general nutrition is to be detected also in the retarded growth and the backward appearance of the sufferers.

Gynecology and Obstetrics.

THE CONDITION OF THE PATELLAR REFLEX IN PREGNANT WOMEN.

Centralbratt fur Gynakologie.

Dr. Julius Newmann has recently investigated this hitherto unnoticed condition. He has made observations upon five hundred women, in most cases in pregnancy, labor and the puerperium. In most of the pregnant patients he found the knee-jerk exaggerated, but in some it remained normal up to the beginning of labor. Doubtless many circumstances (age, parity, presentation of fetus, etc.) had an influence on the state of the reflex. In parturient women with strong pains he found the patellar reflex regularly and quickly increased. It reached its highest point during the period of expulsion, and was often so much increased that it would have been regarded as pathological in other circumstances. On the third or fourth day of the puerperium the knee-jerk was often already normal.—Indiana Med. Gazette.

REPRODUCTION OF THE UTERINE MUCOUS MEMBRANE AFTER CURETTING.

Professor L. M. Bossi has made some interesting observations upon the rapidity with which the uterine mucosa grows again after it has been removed with the curette. In the case of two patients on whom hysterectomy was practiced, 25 and 28 days respectively after curettage, the uterine mucosa was found reproduced and histologically complete. In another case in which curetting was followed 15 days later by hysterectomy, the mucous membrane was found to be well formed, only showing here and there some areas in which the epithelium was deficient (cause unknown). In seven cases it was noted clinically that the uterine mucosa was capable of permitting

the development of the ovum upon it from 25 to 29 days after curettage. In each of these cases impregnation occurred and was followed by normal pregnancy and a labor at full term. From a series of experiments on dogs, it seemed that in them the reproduction of the uterine mucosa occupied a longer time than in the human subject; but Bossi was of opinion that the difference was due to the more complete and direct method of curettage in the former case (i. e., abdominal and uterine incision). In most cases in practice it is probable that the mucous membrane is only imperfectly removed, a fact which,perhaps, explains the tendency to the recurrence of pathological conditions in it. The author does not think that we are justified by the above observations in lessening the period of 60 days' sexual rest usually insisted upon after curetting.—Edinburgh Med. Journal, May, 1895.

VAGINAL OOPHORECTOMY.

The author advocates vaginal oophorectomy for the removal of small cystic prolapsed, painful or adherent ovaries or small tubal cysts or pus tubes, to the abdominal method, and claims the following advantages for the vaginal method:

(1) Rapidity of operation—12-20 minutes.

(2) Freedom from hernia.

(3) Freedom from shock and vomiting.

(4) Freedom from adhesions or intestinal injury.

(5) Freedom from stitch abscess, causing long and tedious convalescence.

(6) Natural drainage, preventing peritonitis.

(7) The ease with which other operations upon the cervix and vagina may be done at the same time which so greatly aid in restoring the patient to health.

The author had a run of twenty cases of oophorectomy without a death.—C. P. Thomas, M. D., in the Journal of the Amer. Med. Asso.

UTERINE GONORRHEA.

Wertheim (Centralbl. f. Gynak., No. 26, 1895) believes that next to the urethra the uterus is the most common seat of gonorrhea. The germ sets up true acute interstitial endometritis; in chronic disease the glandular tissue of the endometrium is greatly increased. The muscular coat is often involved, and a kind of sclerosis of the vessels occurs; whilst the connective tissue undergoes hyperplasia at the cost of the muscle cells. Gonococci are usually to be found in the inflamed mucosa, yet sometimes they are entirely absent and they rarely, if ever, can be detected in the exudations in the muscular coat. The os internum of fers no protection to the entrance of gonorrheal poison into the uterine cavity. The cervix is less involved and the disease is always least marked nearest the os externum. The puerperium is the most dangerous condition when gonorrhea exists in the genital tract lower than the uterus. Menstruation, coitus, and the sound are much less liable to expose the uterine cavity to gonorrheal infection.

WOUNDS OF VULVA FROM FALLING ASTRIDE.

Taffier and Levi (Sem. Med., June 26, 1895) have prepared an instructive article on this subject illustrated by drawings of dissections of the vulvar relations when the subject is erect. The urethra is rarely injured. The bulb and surrounding venous plexuses are often torn and bleed very freely. Not rarely the skin and mucosa remain intact. Then a thrombus forms which may burst or harden, or suppurate or end by becoming a cyst. Skin wounds inflicted by a sharp object on which a woman falls astride seldom run from without inwards. More often the inner side of the vulva is wounded and the hard ramus of the ischium prevents retraction of soft parts, hence dangerous hemorrhage may occur. It is, however, generally venous. To check hemorrhages firm

pressure is unsuited on account of the extreme tenderness of the parts. Compression by antiseptic gauze is the best way to stop the bleeding. Indeed, as recurrence is very common, it is best always to compress a contused wound. The thighs must be tied together and a catheter retained or frequently passed.

Therapeutics.

IN CHARGE OF

DR. LOUIS LEWIS, Philadelphia.

Sulfinidum Absolutum is the name given to saccharin absolutely free from any para acid.

Cupratin is a combination of copper with albumen similar to ferratin made by Fihlene.

To Bronze Leather.—Dissolve one part of tannin in twenty parts of alcohol, and in this stir the bronze powder. Apply with a sponge or a brush.—Pharm. Zeit.

Ricinin, the cathartic principle of castor oil, can be extracted from castor cake by boiling with water, straining, evaporating to an extract, and exhausting with alcohol. The alcohol solution leaves on evaporation a resinous residue in which crystals of ricinin can be seen.

Argonin is a new silver compound, prepared by precipitating a solution of silver nitrate and casein-soda with alcohol. It is described as a fine white powder which dissolves in water with a neutral reaction. The silver in the compound is not precipitated by chlorides, ammonium sulphide, etc. Argonin is said to be especially efficacious in the treatment of gonorrhoea.

Crystallized Cinchonicine is obtained by a French chemist by melting the neutral sulphate of cinchonine at 130 degrees C. and purifying the cinchonine by repeated crystallization from water in the form of oxalate. The solution of oxalate was treated with potash and the free base extracted by means of ether. Though soluble in benzine, toluene, acetone, chloroform and alcohol, cinchonine has not so far been crystallized from its solutions in those liquids.

Absorbable Animal Tissue for Covering Wounds.—J. Lustok has patented a process in Germany (D. R. P., No. 81,324), under which the muscular coating of the intestines of animals is divested of both the interior and exterior layers of mucous membrane, and then digested in a pepsin solution until the muscular fibres are half digested. This is then treated with tannin and with gallic acid. The result is a tissue which can take the place of the natural skin, and which, when laid on the wound, is entirely absorbed during the healing process.

The Red Coloration of Carbolic Acid.—W. von Hanko has investigated this subject and reports (Chem. Zeit.) his conclusions substantially as follows: The coloration is due to an oxidation, the rapidity and extent of which is dependent upon the joint action of certain atmospheric ammonia compounds, the metal of the container and the direct sunlight. On shaking reddened carbolic acid with zinc chloride a greenish color is developed through the action of the red coloring matter on the zinc salt. When powdered zinc chloride was added to the fused acid and the whole kept in small well-stoppered blue bottles no color developed. Carbolic acid packed in tin, in tinned iron, or in aluminium vessels is also free from the tendency toward coloration.

Salicylic Acid in Senega Root.—Rubner, having noticed that a certain sample of senaga root had a distinct odor of gaultheria, attributed this to sophistication. In reply, however, Goldener shows that under certain conditions many plants of the natural order Polygalacee afford methyl salicylate, and that, therefore, the supposed adulterant is a natural constitutent of the root (Pharm. Zeit., Jahr. 40, No. 36, p. 300). C. Dunnenberger points out that the Swiss Pharmacopeia has adopted the detection of salicylic acid in the ether extract of senega root as a test of identity. Methyl salicylate is a normal constituent of the root, and

its detection by this test cannot be regarded as proof of fraudulent addition of oil of wintergreen, as has recently been asserted (Schw. Wochenschr., xxxiii, 197).—Phar. Jour. See also Amer. Drug and Pharm. Record, vol. xxv, 5, p. 176.

ARROWROOT IN AUSTRALIA.

In the directions for practical vegetable gardening (Agricultural Gazette of N. S. Wales), directions are given for growing arrowroot plants in the warmer parts of the colony for home use, both Maranta arundinacea and bannaedulis being recommended. If this arrowroot should ever become an article of exportation, it seems probable that it might be a mixed article. The writer in the Agricultural Gazette of New South Wales recommends that an old kerosene tin should be made into a grater for grating the roots. Arrowroot so made might, perhaps, suit for home manufacture, but from the experimental samples that have occasionally reached this country from other colonies, it is evident that much ignorance exists concerning the remarkable property that starch has of absorbing and retaining the odors of substances placed in contact with it, or even near it, and which is manifested when the arrowroot is used as food.—The National Board of Health Magazine.

GUAIACOL IN THE TREATMENT OF ORCHITIS.

Balzar and Lacour have communicated to the Hospitals Medical Society of Paris the results of their treatment of orchitis with guaiacol (Ann. de Derm et. Syph.). Their attention was directed to this agent on account of its sedative and antithermic action. Pure guaiacol applied in the quantity of one gram, morning and evening, causes a somewhat marked smarting sensation which, in about ten minutes, becomes a simple sense of heat lasting for a couple of hours; the pain is first relieved and then disappears completely, sleep becomes possible and the temperature falls to normal. Pure guaiacol often gives rise to erythema and desquamation of the scrotum; it is, therefore, advisable to use five or ten grams of the drug to thirty grams of vaselin. With this mixture the smarting is hardly noticeable, but the sensation of heat is the same as with the pure drug; the therapeutic effects, while somewhat less prompt, are equally satisfactory, pain is rapidly lessened, temperature lowered and sleep made possible. The ointment as a rule does not irritate the scrotum. The inunctions are made with three to five grams of the mixture, repeated twice daily, the scrotum being covered by a compress held by a T-bandage.

TREATMENT OF DILATATION OF THE STOMACH.

A. Matthieu (Rev. de Therap., No 8, 1895), discusses the treatment of this affection. When it depends upon an organic obstruction at the pylorus, a surgical operation is the only effectual remedy. Frequently, however, it is brought about by simple spasm of the valve. In such cases good results are obtained from the administration of warm drinks, which perhaps act directly upon the spasm; at any rate they allay the pain and lessen the irritation of the mucous membrane, of which spasm is the reflex consequence. With the same object alkalies may be given. When, again, dilatation is the result of atony of the muscular walls, there are several indications to fullfii. (1) The work of the organ must be curtailed by a suitable regimen, highly nutritious substances being given in a state of fine division and in small bulk. The meals, few in number, must be taken at longer intervals. Once or twice a week the contents of the stomach must be removed by the stomach-pump as late as possible after a meal. Too frequent washings-out must, however, be avoided, and a simple emptying of the organ

in often sufficient. Further, muscular action must be stimulated by such means as warm drinks, strychnine, ipecacuanha, alkalies, hydrotherapy, electricity, and massage. (2) Gastro-intestinal fermentation must be lessened. To this end washing-out of the stomach is chiefly to be relied on, the drugs usually given (naphthol, sodii salicylas, bismuthi salicylas, HCl, resorcin) being of secondary consequence. (3) Hyperacidity is to be combated by HCl; excess of this acid itself by alkalies. (4) Pain, if it does not yield to the above-mentioned treatment, will require chloroform water, cocaine or morphine. (5) Constipation is better remedied by enemas than by purgatives. (6) The general condition should be improved by suitable measures.

PIPTOCALYX MOOREI.

Further details concerning the history of this product have been furnished by Mr. J. H. Maiden in the Agricultural Gazette, of New South Wales. He first received the leaves in November, 1892, under the name of the "bitter vine," with the statement that a settler intended making a dye with it. It came from the Guy Fawkes district, over 400 miles north of Sydney, in the Snowy Range. It is stated to grow in the scrub to a height of fifteen feet up the trees, but in the open only to two or three feet. His correspondent remarked (April, 1892), Mr. ——, whose people are dyers in England, is now collecting the leaves and sending them home for use in the business. A half-penny per pound is paid for picking them in the green state, and a handy man can pick about 150 pounds per day. The vines will only stand stripping every other year. Mr. Maiden also received the further information from Mr. S. Lamb that the plant in its wild state occurs only in belts within sharply defined limits. It appears to propagate chiefly from the root and from plants one year old, which send down white fibrous roots (rhizomes?) into the decayed leaves, which thickly cover the ground on which they lie and trail sometimes to the length of several yards. In July, 1892, Mr. Lamb remarked that several dray-loads of the leaves had been sent to Kempsey for shipment during the season. It thus seems probable that the leaves were sent to Europe in the hope that they would be useful in dyeing, but that proving of no value for that purpose, another outlet was sought for them. —The National Board of Health Magazine.

GASTRIC ULCER TREATED BY SCRAPING AND DILATION OF THE PYLORUS.

Podres (Centralbi. fur Chir., No. 15, 1895), holds that in cases of purely cicatricial affections of the pylorus, particularly when associated with extensive adhesions, better results can be obtained by Loreta's operation than by gastro-enterostomy. A case is reported of a man, aged 34, who, for two years had suffered from vomiting after meals, sharp pains in the region of the pylorus, and constipation. On performing laparotomy, the author found that the pylorus and duodenum were enclosed and bound down by extensive adhesions. On incising the front wall of the stomach, at a point about two and a half inches from the pylorus, he made out: (1) A circular ulcer, the base of which occupied a portion of the pylorus and a corresponding part of the smaller curvature, and (2) extensive cicatricial degeneration about the pylorus, so that only the tip of a pair of dressing forceps could be passed into the duodenal opening. This opening was gradually stretched by passing at first the forceps and afterwards one, and finally two fingers. The base of the gastric ulcer was then scraped with the fingernail and a sharp spoon. The wound in the stomach was closed with Lembert's sutures. The vomiting and pain ceased after this operation, and the patient speedily recovered; he regained appetite and was able to sleep well, and when last seen, five months later, had increased in weight.

Miscellany.

COLD BATHS IN PNEUMONIA.

The employment of cold baths for the treatment of pneumonia, and other febrile disorders of the respiratory apparatus, is much affected by a certain school of French practitioners. M. Comby recommends baths at a temperature varying between 68 and 77 degrees F., and affirms that in his experience children suffering from inflammation of the lungs invariably derive the greatest benefit from the procedure, the reaction being especially favorable as regards respiration and circulation. In his opinion quinine, antipyrine, and all the chemical antithermic remedies, are badly supported in this complaint, whereas the cold bath imparts strength and power of resistance to the system. MM. Sevestre, Rendu, Hayem, and Siredey, have brought about rapid defervescence in the pneumonia of adults, as well as children, by the use of the cold bath; and the last named gentleman has even employed the method with success in cases of broncho-pneumonia consecutive to the eruptive fevers. Commenting upon this new departure Dr. E. Masse very judiciously observes:

"Our patients will be slow to accept the treatment by cold baths in affections of the respiratory system. Seeing that pneumonia in young children generally pursues a favorable course, is it reasonable to apply such a process to cases that will recover without any treatment? In severe cases we will do well to think twice before having recourse to a system so little known amongst the public, because in the event of a fatal termination it will not fail to be blamed therefor. I notice that this new fangled treatment has been often enough employed in hospitals, but the medical men who took part in the discussion at the Societe Medicale failed to say whether they were in the habit of having recourse to it systematically in their private practice.—Provincial Med. Jour.

A WARNING TO THE HERBIVOROUS.

Pedestrians fond of strolling through the fields where they are often in the habit of chewing the tender shoots of grass that they pick upon their way will be surprised to hear that the latter apparently most innocent indulgence is fraught with danger to the integrity of their epidermes. M. Poncet has assured the French Academy of Medicine that in the neighborhood of Lyons actinomycosis is quite a common complaint, and that he has succeeded in tracing it to the source we have just indicated. According to this eminent authority the grass munchers are liable to contamination through the fungus spores adhering to the blades of their provender. The parasite is afforded the unwonted chance of locating itself in a soil flowing, so to speak, with milk and honey, and promptly seizes thereupon, the maxillary region being its favorite site. The consequences of this invasion are sometimes very serious, leading to indurations and abscess, to say nothing of the disfigurement; but it is comforting to learn that the foe can be easily and completely routed out of his new quarters by a well directed bombardment with iodide of potassium.—Prov. Med. Jour.

A RARE ANOMALY.

M. Pean, the well-known French surgeon, lately performed a successful operation on a young girl who suffered from incontinence of urine, caused by the presence in her vagina of a supernumerary bladder and ure-

thra. Cases of this description are extremely rare, and where they do occur it is rarer still to find them entirely amenable to art. In this instance the cure is said to be complete.—Provincial Med. Jour.

THE PERILS OF ACROBATISM.

Clowns and contortionists are not a long lived class. Not only do they strain nature unduly in the exercise of their avocations, they also, as a rule, demand too much from their digestive and excretory organs in the matter of alcohol. Professor Quenu recently cured a clown of two aneurisms by extirpation, one being situated on the right iliac artery, and the other on the left femoral. In the first case the external iliac artery had been tied above the tumor as a preliminary measure, as well as the profunda, the muscular, and the circumflex iliac below. In the second not only were the same vessels ligatured both above and below, the femoral vein was also resected for a considerable portion of its course. The clown recovered, but had to abandon acrobatism. — Provincial Med. Jour.

THERAPEUTIC HINTS.

From Practical Medicine.

Iodol is successfully used in eczema of the external meatus.

Creolin is recommended as a superior antiseptic for obstetric use.

Glycerin of alum in the syrup of mulberries is a useful and grateful application in pharyngitis of children.

It is said that one-tenth of a grain of apomorphia, hypodermically, will break up and thereafter prevent an attack of hysteria.

For hemoptysis, if the heart be sound, give from one and-a-half to two and-a-half grains of chloral per rectum.

Early applications of strong solutions of nitrate of silver are recommended for bed sores.

The monobromate of camphor is said to be a specific in the reflex nervous irritation due to dentition.

Nocturnal attacks of asthma may be prevented by giving small hypodermic doses of strychnia and atropia combined.

The Medical Press reports a case of recovery after one ounce of chloral hydrate had been taken.

A new salt of antipyrin, mandelate of, has been discovered, which has all the properties of antipyrin without being poisonous.

A case has been recently reported where three fluid drachms of the tincture of digitalis were taken and retained, and the patient recovered.

Iodide of potassium, added to ammonium chloride cough mixtures, increases the secretion and relieves the hard cough in subacute bronchitis.

SALICYCLIC ACID EXTERNALLY IN RHEUMATISM.

Dr. Kinnicutt reported at a meeting of the Practitioners' Society upon the use of salicyclic acid by inunction in cases of acute articular rheumatism. The formula used by him was that of Bourget, viz., salicyilc acid ten parts, lanolin ten parts, lard one hundred parts. Two drachms of the pomade were rubbed into several areas on the trunk and extremities every four hours, the total daily inunctions representing sixty grains of salicylic acid. The absorption was very rapid, requiring no more than ten minutes for the single inunction, and it was unattended with any irritation of the skin. No covering was employed. The inunction of two drachms of the pomade, representing ten grains of the acid, permitted the discovery of the latter in the urine, at the end of four hours. It had proved to be an efficient method of introducing salicylic acid into the economy, and of the treatment of acute articular rheumatism. It possessed the advantage of not producing disturbances of digestion. —N. Y. Med. Record.

The plague has made its appearance in Foo Chow, China. There is no pretense of sanitation in that city,

so the epidemic will probably continue until the soil has been exhausted.

The wines of the German Fruit Company, of Los Angeles, Cal., are of an excellent quality for medicinal purposes and exceptionally cheap. By writing them an advantageous description can be had of the various brands under their manufacture.

THE RESUSCITATION OF STILL-BORN INFANTS.

(Bedford Brown, American Journal Medical Sciences.)—During the past three or four years, in several cases of this kind, apparently under the most hopeless circumstances, when all other standard methods had failed, he has resorted to hypodermatic injections of brandy or whisky with the most satisfactory results. The amount used is five or six drops in first one arm and then in the other; 15 drops being the largest quantity used in a single case. If the mother has suffered alarming ante-partum hemorrhage, and the infant has been drained of blood before its birth, this method can avail nothing.—Medical Fortnightly.

NEPHROPEXY BY TENDON.

At the May meeting of the Societe Nationale de Medecin de Lyon, M. Poullet presented the case of a woman upon whom he had successfully performed the operation of nephropexy by means of a tendon of the longissimus drosi muscle, the upper end of which was detached from its muscular belly, and passed so as to make a loop, through the posterior part of the capsule of the kidney, supporting the organ and holding it in place. This ingenious method is probably the first one devised for fixation of an abdominal organ by what may be called a living suture, as one end of the tendon is not freed from its attachment. The operation was first successfully performed upon a dog, and later on the human subject.

Prescriptions.

Pityhiasis Versicolor.—

R—Cold cream .....1¼ oz.
Unwashed precipitated sulphur.1 dr.
Iodide of sulphur.....½ dr.
Red oxide of mercury.....15½ gr.

Rub in well three times daily, then dust with a powder made of talc and starch. Mouvement Ther. et Med.

Coryza.—Dr. Godfrey recommends the following spray in coryza, hay fever, etc.:—

R—Acidi tannici,
Acidi boraci .....aa. 10 gr.
Cocainæ hydrochloratis.....2½ gr.
Aquæ .....ad. 1 oz.

It should always be kept in mind, however, that the nasal mucous membrane stands astringents badly. —N. Y. Med. Record.

Migraine.—

R—Butyl-chloral hydrat.....15 gr.
Tinct. gelsem. semper.....30 m.
Tinct. cannabis Ind.....15 m.
Glycerin .....½ oz.
Aquam .....q. s. ad. 3 oz.

M. Sig.—A third part to be taken at once. The dose to be repeated in half an hour.—Practitioner.

Warts.—Professor Kaposi, in multiple warts of the face, employs the following application:—

R—Sulphur .....20 parts
Glycerine .....50 parts
Pure con. acetic acid.....10 parts

Apply locally to each wart.

Or this powder may be employed:—

R—Calomel .....30 parts
Boric acid .....15 parts
Salicylic acid .....5 parts
Cinnabar .....3 parts

Rub into the wart two or three times a day.

External Application of Guaiacol.—Dr. Sigalea reports that the absorption of pleural effusions is promoted by painting upon the surface the following preparation:—

R—Guaiacol. .....45 gr.
Glycerin.
Tr. iodi .....aa 5 dr.

M.—The application is made once daily for several days. Dr. Sigalea adds that he has successfully made use of the same application to the lumbar region in cases of scarlatinal nephritis with anasarca and anuria.—Le Progres Medical.

The Times and Register.

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WHEN AND HOW TO CURETTE THE UTERUS.*

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INDICATIONS.

The operation of curetting the uterus is indicated in a number of pelvic disorders which differ widely in their nature and their gravity.

1. Probably the lesion that most frequently demands its performance is chronic endometritis. But great care is required in the proper selection of cases; and this for two reasons. (a) Many cases of endometritis recover completely without any operation. Thus in simple uncomplicated cases we would first try the effects of non-surgical remedies—rest, hot douches, saline aperients, glycerine and ichthyol tampons, such drugs as bromide of potash, chlorate of potash, hydrastis and viburnum, and the occasional swabbing out of the uterus with iodine or carbolic acid. Should these measures fail, curetting is distinctly indicated, and will, in the great majority of cases, effect a cure. (b) Endometritis is frequently associated with other and much more serious pelvic lesions, which call for a very different line of treatment. Thus endometritis, due to sepsis or gonorrhea, is often complicated with pelvic cellulitis and peritonitis, with ovaritis, salpingitis, or pyosalpinx. To curette the uterus in the presence of such lesions would be to court disaster. I have seen a slumbering salpingitis converted into a virulent and fatal pyosalpinx by such a proceeding. It may be laid down as an absolute rule that if there be evidence of periuterine inflammation or disease of the uterine appendages, curetting is contra-indicated.

2. The second great class of cases which call for curetting are those where we have, as the result of the incomplete emptying of the pregnant uterus, the retention within its cavity of pieces of membrane, fragments of placenta, even portions of a putrid fetus. These retained morsels may give rise, on the one hand, to severe uterine hemorrhage, and on the other to septic absorption. The symptoms are not at all in proportion to the size of the offending fragment. It is remarkable how small a piece of placental tissue—not larger than a hazle nut—will cause frightful and most persistent floodings. On the other hand, I have removed a mass of placenta as large as a man's fist, which had been retained in the uterus for many months, and which only caused an offensive discharge.

In these cases there must be no delay in operating—no dallying with medicinal remedies. Ergot and hydrastis are useless to relieve the hemorrhages; antiseptic injections will not stop the offensive discharges; quinine and anti-pyrin will not check the progress of septic absorption. As soon as the presence of the offending fragment is diagnosed it must be removed with the curette. In no class of cases does operative interference yield more brilliant results. The hemorrhage ceases at once, the offensive discharge disappears, the symptoms of septic intoxication subside,

*Abstract from the Provincial Med. Journal.

and the patient's health is restored wth marvelous rapidity.

But it must be remembered that in the septic cases the prognosis depends to a large extent on the degree of septic absorption. If it be only a sapremia, the removal of the putrid fragment will cure the patient; if it be a septicemia, the outlook is much graver. Curetting will undoubtedly save many cases of puerperal septicemia where the fons et origo mali is a mass of necrosing material in the uterus, and where the systemic infection is not profound. But it is obvious that if a pyosalpinx have formed, or there be suppurative peritonitis, curetting will do positive harm. Curetting is not a panacea for puerperal fever; much discrimination is required in the selection of suitable cases. The best results are obtained where the symptoms clearly point to a retained and putrid fragment in the uterus, where the surgeon is called at an early stage of the disease, and where the clinical phenomena are those of septic intoxication rather than of septic infection.

3. There are two diseases of the uterus in which curetting has been advocated as a palliative—viz.: myoma and cancer. It has been recommended in certain cases of myoma as a means of checking the excessive losses. I cannot too strongly condemn such a proceeding. If the tumor be causing symptoms severe enough to call for interference, then it is better to perform removal of the appendages, myomectomy, or hysterectomy. If the symptoms be so slight as not to call for such severe measures, rest and the usual medicinal remedies will suffice. Curetting, at best would only temporarily relieve the patient, and might do infinite harm by inducing sloughing of the tumor and subsequent septicemia.

So, also, in the case of cancer, it is questionable if it afford any but the most transient benefit. Even if it temporarily relieve the patient, it is obvious that we cannot by its means remove the whole disease and so cure the patient. I have, it is true, seen striking temporary relief afforded by freely scraping and gouging away the friable rotting diseased surface, and then vigorously searing with Paquelin's cautery, the raw tissue exposed. The hemorrhage and stinking discharge cease for a time, the patient's pain diminishes, she puts on flesh, and frequently buoys herself up with false hopes of cure. But at best the respite is short; and in many cases when the disease again manifests itself it advances with fearful rapidity. When the growth is strictly limited to the cervix or the endometrium, we should offer the patient the more certain hope of cure afforded by vaginal extirpation of the uterus. If the disease be too far advanced for this operation, the less we interfere with it the better.

4. Lastly, curetting is occasionally demanded for diagnostic purposes. Where we suspect that the patient is suffering from early cancer or sarcoma of the uterus we may obtain, by curetting, fragments of tissue for microscopic examination, and may thus diagnose malignant disease in its early and most remediable stage.

ARMAMENTARIUM.

The armamentarium for curetting the uterus should include the following: Anesthetics, antiseptics, Clover's crutch, razor, speculum, vulsellum forceps, a set of uterine dilators, a set of curettes including a "flushing curette," uterine sound, scissors, six Playfair's probes (or some substitute) armed with absorbent wool, Paquelin's cautery or a bottle of iodized phenol, iodoform gauze, sponges or gauze compresses, catheter, douching apparatus. I shall presently refer in detail to the use of these various instruments.

ASEPSIS.

It is of the utmost importance that everything that comes in contact with the genital tract during the operation must be aseptic. The instruments should be made entirely of metal and should be boiled for fifteen minutes in soda solution (1 per cent.) immediately before each operation. Instead of sponges I use guaze-compresses made of a square of gauze folded into eight thickness-

es. These should be sterilized before the operation by boiling or steaming for an hour. They are not quite so absorbent as sponges, but they are cheap, easily prepared and easily sterilized. The same compress should never be used twice; and after the operation all that have been used should be destroyed. For the disinfection of the hands of the surgeon, his assistant and the nurses, I believe in prolonged scrubbing with soap and lysol solution (1 in 100), using a nail brush and loofah, followed by immersion in corrosive sublimate solution (1 in 1000).

PREPARATION OF THE PATIENT.

The preparation of the patient is important. When we can choose our time the operation is best performed about midway between two menstrual periods. In many cases, however, as when the hemorrhage is continuous or the symptoms are urgent, we must operate without delay. For twenty-four hours before the operation she must rest in bed. The bowels must be freely opened the day before; and on the morning of the operation an enema should be given to ensure an empty rectum. The vagina should be well douched the evening before, and again on the morning of the operation, with some reliable antiseptic solution—lysol, iodine, or corrosive sublimate. Immediately before the operation the nurse should pass the catheter and empty the patient's bladder.

The patient having been anesthetized she must be placed in the lithotomy position—and this is most conveniently effected by Clover's crutch. Even in cleanly women the hair about the genitals is laden with micro-organisms and hence should now be shaved off with a razor. The vulva should be scrubbed with soap and lysol water (1 in 100), care being taken to remove the sebaceous matter that is apt to collect in the various folds.

The vagina should be similarly cleansed and as far as possible rendered aseptic. It should be vigorously wiped out with pads of sterilized gauze, in order to remove as far as possible the thick mucous discharge that besmears it. This mechanical scouring is more effective in freeing the vagina of germs than is mere douching with antiseptics.

Before commencing the actual operation a final bimanual examination should be made in order to make sure that there is no disease of the appendages and that the uterus is not fixed by perimetric adhesions.

INSERTION OF SPECULUM.

The perineum should be pulled back by some form of speculum. Sims' duck-bill speculum is the form usually employed for this purpose, but it necessitates the employment of an assistant. I can strongly recommend, in place of it, the use of Auvard's speculum. This is heavily weighted with a ball of lead, so that the instrument is self-retaining, and by its own weight pulls back the perineum and posterior vaginal wall. I have found it of great service when I have had to perform curetting without assistance. It can only be used, however, when the patient is in the lithotomy position.

DILATATION OF THE CERVIX.

The next step is to dilate the cervix. This is not always necessary. For instance, in puerperal cases the os is usually widely gaping and the canal patulous. There are numerous methods of effecting dilatation, each of which has its own peculiar drawbacks, though some are much more objectionable than others. Of all methods, that involving the use of tents is the most dangerous. The risk of sepsis, with all its disastrous consequences, is so great that the tents may at once be dismissed from consideration.

Mr. Lawson Tait's method of dilating the cervix by slowly forcing through it a series of conical dilators, by means of continuous elastic pressure, is highly ingenious. It will, in the great majority of cases, effect its purpose well, and secure full and complete dilatation of the cervix. But, unfortunately, the method has many serious drawbacks. It is tedious, the process occupying from twelve to forty-eight hours. It requires very careful adjustment of the elastic cords in order to direct the dilator in the right direction. Should the uterus be retroflexed or

anteflexed the dilator is apt to plough its way in to the muscular tissue of the uterine wall and not dilate the internal os at all. It necessitates frequent attendance and repeated examinations on the part of the medical man. It usually causes the patient much pain, sometimes necessitating the free administration of morphia. But probably the most serious objection to the method is that it is rather apt to be followed by inflammatory mischief in and around the uterus, partly from mechanical irritation, partly from sepsis. I used this method exclusively for over four years, but was compelled reluctantly to abandon it in favor of rapid dilatation by means of Hegar's dilators, or some modification thereof. This latter method is infinitely easier, simpler, and less troublesome for the surgeon; it entails no suffering on the part of the patient, being effected under anesthesia; and I am convinced that it is safer. Whilst the dilatation it effects is not so perfect as that attained by Mr. Tait's method, it is all that is required for the purposes of curetting.

The particular dilators I myself prefer are those introduced by my friend Dr. Hawkins-Ambler, of Liverpool. I have used them extensively for the past ten months, and have found them very satisfactory. They consist of a graduated series of metallic bougies constructed on the principle of the "wedge-shaped" bougies used for dilating the male urethra. Being made of solid steel they are easily rendered aseptic by boiling in soda solution (1 per cent.) for a few minutes. Having a highly-polished surface they slide in with a minimum of friction. A set of six will be found sufficent for all ordinary purposes, and will easily, rapidly, and safely effect dilatation.

The anterior lip of the cervix should be seized with vulsellum forceps and drawn down to the vulva. If the uterus be so held (by adhesions) that it cannot be pulled down, the operation had better be abandoned. Having ascertained by means of the uterine sound the precise depth of the uterus and the direction of its canal, the surgeon holds the vulsellum firmly in the left hand and with his right slowly passes the smallest-sized dilator (smeared with some antiseptic lubricant) into the uterus. If it meets with no resistance he at once withdraws it and passes the next size. If the cervix grips the dilator and resists its passage, the surgeon must press the instrument very slowly home. Having got it in he should wait a little before withdrawing it. After a longer or shorter pause the grip of the cervix will be found to relax, and then the instrument may be withdrawn and the next size inserted. If this relaxation of the cervix does not occur within a few minutes the instrument should be withdrawn and reinserted.

The limit of safe dilatation varies in different cases. Where the patient has previously had a child it is usually easy to dilate the cervix until it will admit the forefinger. But if the uterus be nulliparous, and particularly if it be infantile, the process of dilatation is more difficult, takes a longer time to effect, and should not be carried to the same extent. As a rule it is possible to dilate a parous uterus in from ten to fifteen minutes, whilst a nulliparous womb may require half an hour or more. When the most resisting part of the cervix is at the external os it is sometimes necessary to nick it bilaterally with scissors before dilating. The chief objection to the method of rapid dilatation is that if the tissue of the cervix be very resistant it will not stretch but tear. If unnecessary violence be employed, the uterus may be perforated or even ruptured by vertical splitting. Such accidents, however, should never occur if reasonable care be taken, and there be no undue force or haste on the part of the surgeon.

A less serious accident is laceration of the cervix, which may occur if its tissue be very soft and vascular, the teeth of the vulsellum tearing out when the dilator meets with resistance. If the degree of dilatation will permit, the forefinger should now be passed into the uterus and its cavity explored.

APPLICATION OF THE CURETTE.

For nearly all cases the sharp curette will be found preferable to the blunt one, and the best form is a modification of Simon's sharp spoon. It should be made wholly of metal so that it may be sterilized by boiling before each operation. The largest size that will easily pass the cervix should be gently introduced and passed without any force until it impinges on the fundus. Steadying the cervix with the vulsellum the sharp edge should be pressed firmly against the mucosa and the curette drawn slowly down—scraping off a vertical strip of the whole thickness of the mucous membrane and exposing the muscular coat.

By a repetition of this maneuver a series of parallel strips are removed until first the anterior, then the posterior, and then the lateral walls are completely denuded. The surgeon must then carefully curette the fundus and the two upper lateral angles leading to the Fallopian tubes.

CLEANSING THE UTERUS.

The flushing curette is a most useful instrument when the uterus contains much debris—as in cases of retained secundines. The handle and stem are tubular, and if the instrument be connected with the tubing of a hydrostatic douch-can, will permit of the passage into the uterus during the act of curetting of a constant stream of weak antiseptic solution, which carries with it, as it escapes through the cervix, all clots and loose fragments of tissue. If the solution be used hot enough it will also check bleeding.

If the flushing curette be not used, the clots and tissue debris should be wiped away by means of probes covered with absorbent wool. The instrument commonly used for this purpose is "Playfair's probe." This consists of a wooden rod capped with metal. It is objectionable, because blood, etc. is apt to lodge between the wood and the metal, or soak into the wood, and be a source of sepsis. Where the probes are made wholly of metal (steel or aluminium), they are not open to this objection, being easily sterilized by boiling or by being heated in a flame. They are, however, somewhat expensive (costing three or four shillings each).

For the last two years I have used wooden skewers ("pheasant skewers") instead of Playfair's probes, and have found them to answer admirably I buy them from the poulterers in bundles of a hundred. To prepare them the ends must be roughly rounded off with a penknife and the skewers boiled or steamed for an hour or more to sterilize them. When wanted for use the end should be wetted and the wool rolled on in a thin film. They are so cheap (costing sixpence to one shilling a hundred) that one can afford to destroy, after each operation, all the probes that have been used. No probe is used twice, and in this way the risk of carrying septic infection from one uterus to another is reduced to a minimum. When it is remembered how frequently curetting is performed in septic cases, it will be seen that this risk is no imaginary one.

APPLICATION OF CAUSTIC.

Having thoroughly washed or wiped out the cavity of the uterus and cleared away all clots and debris, we should apply to the raw surface left some powerful cauterizing or disinfecting agent. For a long time I use to sear the interior of the uterus with Paquelin's cautery. The objection to its use is that the caustic effect is not distributed evenly over all the raw surface. The lateral angles and part of the fundus are apt to be missed, whilst the cervix may be so severely burned that sloughs form. At each spot it sears, its germicidal influence is of course intense; but it does not affect all parts equally, the sulci, crevices, and lateral angles escaping. For this reason it is better to swab out the uterus with a caustic liquid such as iodized phenol, applied on a wooden probe armed with absorbent wool. Any excess of the caustic that trickles out of the cervix must be at once removed with absorbent wool or gauze sponges.

PACKING THE UTERUS.

A long narrow strip of iodoform gauze (one inch wide and one yard

long) should be ready at hand, and the uterus firmly packed wth it, the end being left hanging out of the cervix into the vagina. This gauze packing serves four useful purposes —It soaks up all excess of iodized phenol, it checks bleeding from the denuded surfaces, it protects the raw surface from infection from the vagina, and it ensures the drainage of the uterus. The vagina must be wiped free from clots, etc., and then lightly packed with iodoform gauze. A pad of antiseptic absorbent wool is placed over the vulva and fixed with a T-shaped bandage. The gauze may be removed on the third day, and thereafter the vagina douched night and morning with lysol or iodine water. In all cases the patient must stay in bed for ten days after the operation.

RESULTS.

The immediate risk of the operation is extremely small and the ultimate result excellent, if the operation be skilfully performed, in suitable cases, and due aseptic precautions be taken. Conversely, if the surgeon use unnecessary force or bungle his work, or disregard contraindications or neglect the rules of surgical cleanliness, the patient runs the gauntlet of such disasters and complications as rupture or perforation of the uterus, laceration of the cervix, pelvic cellulitis, pelvic peritonitis, salpinigtis, pyosalpinx, septicemia and pyemia—truly a formidable list! Not one of these evil sequele ought, however, to occur if the surgeon follow the indications I have laid down in this paper.

SOME CLINICAL NOTES.

BY E. CHENERY, BOSTON, MASS.

LUPUS OF THE FACE.

A clergyman, aged 63, of used-up nervous system, had a lupus on the left side of the nose for three years. It extended from the ala upward to the outer third of the eyelid. The whole was curetted out to the firm, hard flesh, with a sharp curette under ether. This included a nest of the cells dipping down under the eye. The whole was dressed with chloride zinc paste to cauterize any stray cells and to bring the surface into a more rapidly healing condition than the curette left. The wound measured 2 1-2 by 1 1-2 inches. Weak solution of the zinc, and bread and milk poultices were then applied, and brought prompt and successful healing.

A CASE OF ENURESIS.

A boy. 9 years old had always been weak in this respect, so that he wet his clothes, wet down under his seat in school, wet the bed at night, and was a nuisance to himself and all concerned generally.

Nothing which had been tried appeared to amount to much. The teacher was requested to give him liberty to go out when ever he felt he must, without waiting to ask permission at the time. Then he was put on large doses—as many as ten drops—of iodide of iron. In a short time improvement began to show, which went on to permanent cure, by continuing the iron for some weeks.

CHOLERA INFANTUM.

Nothing else has brought me the prompt and almost certain success in cases of this disease that I have for years secured by the hyposulphite of soda. It has the double power of arresting the fermentation and of purging away the foul matters from the bowels. If a case can be got hold of reasonably early. it is almost certain to yield to this remedy. After this the chalk mixture or bismuth, in place of chalk mixture, completes the cure. Where the bowels are inflamed, as in enteritis or enterocolitis, its work, is not so satisfactory, because there is more than the fermentation to contend with. Even here it is most valuable in conjunction with minute doses of calomel and bismuth and the free use of flaxseed tea, with a pre-digested diet.

A CASE OF APPENDICITIS IN A YOUNG WOMAN, OR POSSIBLY A CASE OF PERITYPHLITIS.

An unmarried woman, of 19 years, was taken with pain and tenderness

in right iliac. A tumefaction became apparent. At length, by palpation and vaginal examination, both my son and myself were satisfied that pus had formed.

Without using ether, a speculum was introduced into the vagina and through it a needle passed, penetrating the pus cavity, as was evident by the escape of pus through the needle. A pump was attached and six ounces of extremely fetid pus was removed. Three days later another similar operation was repeated, bringing away three ounces of pus. Then the cavity was thoroughly washed out with solution of the bichloride. This ended that job completely.

ABSCESS OF THE CHEEK.

It is to be borne in mind that matter forming in the tissues beneath the skin of the cheek cannot get through the skin. The circulation in the skin is so very active in this portion of the face it counteracts all the disintegrating action of the abscess; hence the pus forms a sack for itself here, as it does in the brain and the heads of the bones; and it will remain indefinitely. If the matter forms by the zygoma or over the malar bone it is likely to erode the connective tissue on the lower side and advance downward till it reaches the point in the cheek where the muscles cross to make the dimple, and there it will stay and encapsulate itself.

How then shall such cases be treated?

If the abscess is old and becomes encapsulated it may be opened by a fine knife, just where the dimple should be, and the sack injected or treated by iodine, to promote its absorption. In this way there will be no perceptible scar, only an apparent dimple. I once so treated a little lady who had a dimple on the other side of her face and, so far from injuring her features, I simply converted her into a double-dimpled lassie.

If the abscess be recent, without the capsule, the skin of the face may be preserved by opening from the inside of the mouth, though it is more difficult to do so, for the depth of the tissues is several times the thickness of the skin. Recently I had a young man whose face was very fair and smooth. He had had an inflamed upper molar, which was not timely removed, and the inflammation got out into the tissues of the face and formed a large abscess over and above the place for the dimple. I laid him down, administered chloroform, and with a knife at 45 degrees with the handle, I opened from the buccal cavity, carefully selecting the space between or through the edges of the muscles, so as to strike the cavity of the abscess through as little muscular tissue as possible, the abscess lying just beneath the skin. The matter was thus discharged, but it required considerable after treatment to keep the opening clear till the abscess cavity healed and ceased to flow pus. However, a week brought us through all right, and his cheek is now unmarred and as fair as ever.

A THERAPEUTICAL STUDY OF SALOPHEN.

Among the many advantages which salophen presents over the salicylates especial emphasis must be placed upon its absolute freedom from toxic effects and its perfect safety in cases of rheumatic affections attended with severe cardiac disturbances. A case in point is cited by Dr. Marie in a report on salophen made before the Medical Society of the Hospitals of Paris, May 11, 1895. The patient, a man, was suffering from acute articular rheumatism, with arotic incompetence of old standing and attacks of angina pectoris. Salicylate of soda was administered, but under its use the cardiac symptoms were markedly increased. Salophen was then resorted to and considerable improvement obtained within two days after its administration. In consequence of its too rapid discontinuance, however, the cardiac trouble recurred, but was promptly checked by resumption of the drug, a complete cure resulting within a fortnight. This case, like many others reported

by clinicians of this country and in Europe, clearly demonstrates that, while equal in efficiency to the salicylate, salophen is vastly superior on the score of safety. It would also appear from Marie's observations that salophen may prove as serviceable in the treatment of gout as it has in rheumatism. In a case of plumbic gout, which had previously resisted the salicylatem, the new remedy was not only well tolerated, but exerted a rapid and favorable effect. In chorea, which seems to be related to the rheumatic diathesis, salophen also afforded good results. Another point in favor of this drug is the fact that in cases where the salicylate produced marked gastric disturbance, the digestive functions were re-established under its use. Dr. Marie regards 3.0 to 4.0 gm. as the average daily quantity of salophen, which he is in the habit of dividing into six doses. In view of its tastelessness and insolubility it can be readily given dry on the tongue and followed by a drink of water, or in capsules or wafers. It can also be obtained in the form of tablets, which are by many considered an eligible means of administration.

The William F. Jenks memorial prize of $500, under the deed of trust of Mrs. William F. Jenks, has been awarded to A. Brothers, M. D., 162 Madison street, New York, for the best essay on "Infant Mortality During Labor, and Its Prevention."

The Prize Committee also reports as highly meritorious the essay on the same subject bearing the motto, "Vade Mecum."

The writers of the unsuccessful essays can have them returned to any address they may name, by sending it and the motto which distinguished the essay to the Chairman of the Prize Committee, Horace Y. Evans, M. D., College of Physicians, Philadelphia.

JAMES V. INGHAM,
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PROFESSIONAL LOYALTY.

Something less than a year ago the Philadelphia Hospital managers demanded the resignation of Dr. Judson Daland for no other reason than that it was believed he had imposed needless cruelty on his patients suffering with malaria in order to secure from each a drop or two of fresh blood that he might microscopically examine the specimens for the plasmodia-malariae. The operation was entirely harmless and without pain; besides, by it, it was possible to recognize the actual character of the disease present, and, therefore, institute remedies possessing specific action on it.

The doctor was peremptorily relieved of duty and the trustees at once proceeded to nominate his successor, their choice falling on that eminent Philadelphia physician, Dr. H. A. Hare, a gentleman known the

world over as standing in the very front rank of medical progress.

But they counted without a host, for, to the eternal honor of Dr. Hare be it said, that while the clinical advantages offered were of infinite value and could be well utilized, he spurned the offer, rather submitting to make the sacrifice than succeed another practitioner under the existing circumstances.

In what striking contrast was this action of a member of the faculty of the University of Pennsylvania with that of two of the medical colleges of New York very recently, as we have observed at the Harlem Hospital.

A member of the out-door department of the hospital, who was expelled from the service more than a year ago, finding that he could not be reinstated, went before the new Board of Commissioners of Charities and Corrections and demanded a reopening of his case. The Medical Board of the hospital were cited to again submit the evidence on which their action was based. After the hearing the Commissioners declared that they saw no grounds for reversing their action of a year before; but they added that the expelled practitioner had come to them and threatened legal action against the Medical Board and warned them that he proposed to go into the press and expose the management of the Harlem Hospital.

A few days after this, true to his promise, through a third-rate daily newspaper he commenced his attack, making the most scurrilous and malicious charges against the members of the medical staff individually—at first for inhumanity in experimental, necropsy, dissecting and operating work, and then on the entire medical management.

The hospital Medical Board, being apprised at the central office that this sort of rotten-egg warfare was to be leveled against it, took no positive action in this matter of newspaper clamor.

But imagine their surprise soon after when all the daily papers of New York simultaneously published the announcement "that in consequence of scandals unearthed, etc., the Commissioners had been forced to act, and had dismissed the entire Medical Board of the Harlem Hospital."

This appeared so extraordinary and improbable that it at first seemed incredible that a Medical Board, held strictly responsible for a medical service which provided no remuneration, would be wiped out in this fashion, and it was believed to be a canard; for, to displace an entire Medical Board of a hospital, without charges or cause, or some opportunity for defense, without a hearing, or any opportunity of vindication, was, indeed, even in the most palmy days of Tammany Hall, something unprecedented and unheard of.

On appeal of the Medical Board to the Commissioners they denied that there were no charges against any member of it, but that in order to relieve themselves of the responsibility of the service they had decided to leave the reorganization of the service to the three regular medical colleges and the ex-collegiate of Bellevue Hospital; in the meantime promising to reappoint any of the old members of the board so nominated.

This virtually left the matter in the hands of the medical profession. Accordingly to this the old board looked for redress; and, let us see, now that the test came, the attitude of two medical colleges in New York toward aggrieved and injured members.

The former board consisted of Drs. John G. Truax, executive of the hospital, who with Dr. S. G. Armstrong were the visiting physicians; Drs. Thomas H. Manley and Charles B. White, visiting surgeons, and Dr. A. Palmer Dudley, gynecologist.

By the reorganization the gynecologist's position is abolished andthe staff is increased from five to eight—four physicians and four surgeons, of which two were nominated as usual.

Immediately the ex-collegiate of Bellevue, which represents the outside profession, renominated Dr. Truax as visiting physician and Dr. A. Palmer Dudley as visiting surgeon. The president of the University Medical College faculty, Dr. William H. Thomson, promised Dr. Man-

ley a renomination, as did the faculty of Bellevue Hospital promise Dr. White; each of these gentlemen entering the surgical service of the Department of Charities and Corrections as alumni, and representatives of these schools, after competitive examinations, the former in 1875 and the latter in 1882.

Dr. T. T. Armstrong, being about to accept another appointment, did not seek renomination.

The University failed to keep faith with Dr. Manley and ignored him in their nominations. Bellevue, from which we have heard so much on defending medical honor and independence in the late code controversy, stultified itself in disregarding one of its most loyal alumni, ignoring Dr. White.

The College of Physicians and Surgeons alone has stood out and delayed to move in the matter until they have had an opportunity to investigate the whole affair and determine whether or not it can be a party to imposing a very serious injustice on members of the profession, who have for years served in the performance of very arduous and responsible duties in the public service, and in the end to be treated with much less consideration than common street sweepers.

To summarily displace medical officials who enjoy liberal salaries is one of the events of politics, which all must be prepared for who accept such places, but to remove without proper cause physicians who serve voluntarily and derive no returns, except what indirectly accrues through a large sacrifice of time in attaining proficiency, is not only a wrong, but is certain in the end to react with detriment to the service, as one with unstability of tenure and uncertainty of position is quite certain to give but indifferent attention to his cases.

THE CORRUPT, DEMORALIZED LAY PRESS.

The news of the trial of Dr. Reeves by the Amick Company once more brings out in strong relief the present degenerate state of the press. His trial has unearthed the vilest scheme ever known in journalism to force on the notice of a confiding public the special virtues of an advertised nostrum. That the press was bribed was only too clear to any one who followed the case.

In this case the associated and local press of Chattanooga is charged with forging dispatches and declaring that the Chattanooga Board of Health was working wonders with the "Amick Cure," while as a matter of fact no such medicament was ever known to that body.

Dr. Reeves, the able and fearless foe of all descriptions of fraud and impositions, for simply repudiating the allegations of the lying press, and exposing the audacious impostors, was tried for libel, and in consequence had to bear a very heavy financial outlay in defending himself.

It strikes us as most extraordinary that in an emergency of this kind the medical journals of our country with a united voice should not make an appeal to the profession of this country for a subscription, not only to reimburse Dr. Reeves, but to provide a substantial testimonial to this noble representative of our craft for moving on single-handed and exposing the venal character of our American press and crushing out of sight this quack concern, which hoped to realize millions, rob thousands of poor dependent creatures and destroy very many lives which might be saved.

NEW YORK WAKES UP AND A GENEROUS LEGISLATURE APPROPRIATES ABUNDANT FUNDS FOR MORE HOSPITALS.

We have latterly called the attention of our subscribers, the majority of whom are general practitioners who constitute the bone and sinew, and brains, too, of our profession, to the alarming rate with which private dispensaries and mammoth hospitals are sapping the vitals of practice, and yearly making it well nigh impossible for him to maintain himself

by a strict adherence to honorable and legitimate methods in his relations with his patient.

We saw Pennsylvania vote away a half million dollars lately for more hospitals, colleges and dispensaries; and now comes to us the news that the Society of the Lying-in Hospital, the Post-Graduate School and the Polyclinic, of New York, are each to have $30,000 apiece a year from the State funds to run them. All these, it will be remembered, are private corporations, and are controlled by stockholders, the majority of whom are the doctors identified with them and their relatives. By the act of consolidation it is provided that the State will pay $1 a day per head for each patient kept in the hospital. This provides support for about 100 patients in other wards, and ample supply of clinical material for any medical college, however exacting. Particularly so is it in this instance, when they have the City Hospital or Bellevue as a dumping ground for all their undesirable or chronic cases.

This State support is an immense lift to those institutions, but it will be interesting to note how the general profession will view the matter, with the prospects of having their chances for a livelihood further menaced by these medical monopolies, now enabled to inflict greater damage on practice than ever.

Electro-Therapeutics.

IN CHARGE OF

DR. S. H. MONELL, New York.

STATIC ELECTRICITY — METHODS OF ADMINISTRATION.

Article 4.
(Copyrighted.)

Sparks may be administered, as may also the breeze, while the patient is electrified with either the positive or negative pole; and with the electrode attached to either pole, or to the ground. When we desire a muscular contraction, without the sting which is more or less inseparable from a spark directly upon the patient, the author's method of interrupting the current is of use. An example would be a case of lateral curvature of the spine, which usually occurs in young girls whose nervous condition presents objection to any form of treatment involving pain. The spine is bared sufficiently to apply an electrode directly upon the skin, and over, in turn, the motor points of the faculty muscles. The electrode is attached by a chain to one pole of the machine. The other pole is grounded, and with a grounded ball electrode, sparks are slowly taken from the pole to which the patient is connected. Another way—and one equally available—consists in holding a small ball electrode upon the spinal motor points while the machine is adjusted as in ordinary positive electrification. With a grounded ball electrode, sparks are then applied to the metal part of the electrode held in contact with the patient, but at a distance from the ball, which presses upon the motor point of the muscle. The contraction which follows is painless and effective. In this way an unlimited number of sparks may be applied to any given point without creating tenderness, as do repeated sparks upon a single place upon the body. Moreover, the strength and frequency can thus be so regulated as to produce effects reaching from slow, single, deep contractions to the infinitely rapid, sedative quality of the high-tension faradic coil. If a spot upon which I wish to repeat heavy, direct sparks becomes painful, as for instance a ganglion or goiter, I first obtain a degree of local anesthesia by this method of a high-tension application or by a sedative breeze, and then can follow with the sparks with no discomfort. In applying sparks upon the skin, it may be dried perfectly, if desired, by first dusting it with a little powder. The spark is then thicker, cleaner and less sharp. Air spaces under folds in the apparel interfere with sparks and should be removed by drawing the garment to a smooth fit. Damp clothing will interfere also, and some fabrics facilitate the application more than oth-

ers. A steel buckle, a bunch of keys, metal buttons, ribs and steel springs in waists and corsets will attract the spark intensely and produce too sharp a sensation for comfort in some cases. In all static administrations there must be two objects kept in view. One is to produce benefit to the patient; the other is to avoid all possible annoyance. It is always desirable to strive to make the treatment as agreeable as possible, and this is generally as important a factor as the constitutional effect of the treatment, for the two results will proceed better in double harness than if the patient thinks the cure as bad as the disease.

Considered as a mere luxury and apart from remedial effects, no other form of medical treatment is capable of imparting the sense of satisfaction which can be obtained from certain forms of static electricity. Unless the effect of a counter-irritant is especially desired, the breeze should be as agreeable around the head and spine as the soothing manipulations of a dextrous hair-dresser. If sparks are applied with conservative caution until tolerance develops in the tissues, there will be very little complaint. Slowly repeated, clean-cut sparks will be readily endured even by hypersensitive neurasthenic cases. Never treat a new patient to a fusillade of sparks at a first sitting.

There are certain anatomical localities which are usually to be avoided. In a general way the head should be omitted from spark treatment, though to this rule, as well as to most others, there are exceptions, and modified sparks are frequently applied to special portions of the head with great benefit. The breast, both in male and female, and particularly the nipple, is sensitive; in many cases extremely so, and should not be struck with a spark except for sufficient cause. Bony prominences throughout the body are regions where caution is advisable, there being no pillow of soft tissue to break the blow. A spark on the dorsal surface of the foot or hand, and especially over a toe or finger nail, is more uncomfortable than many patients would admire unless the conditions are altered by disease, as they would be in a case of chronic synovitis, or localized edema. The genitals, most of all, must be avoided. The sickening sensation caused by a spark in this peculiar sensitive region would have no other excuse than bungling carelessness.

Besides the ordinary and single, thick percussion spark, which has hitherto been the sole subject of our consideration, there is a form of "friction" spark which has certain uses. It may be obtained in several ways. The ball electrode may be enveloped in a flannel covering and rapidly rubbed over the surface, if applied directly to the skin. Upon the covered body the same effect is furnished by the resistance of the garments worn, especially if of wool. It is a near counterpart of general faradization, is quickly applied, and exceedingly valuable in myalgias and as a cutaneous stimulant. One of the most effective methods, also, and one often employed by the author, is secured by rapidly interrupting the current and using the spray electrode. The technique is as follows: Let the patient hold the conducting rod above or below the sliding positive pole of the machine so as to draw a series of rapid sparks of a length to suit the conditions of the case. The point electrode is then grounded or connected with the opposite pole, and rapidly swept over the affected part at the distance which is found to produce the proper effect. As the electrode approaches nearer the spine or limb to which it is applied the breeze will merge into a brush discharge, and still nearer this will become filled with jets of fine, flying electrified particles of air; a veritable electric spray! Stronger sparks will occasionally be interspersed with the finer jets, if the elctrode is swept still nearer, and the administration partakes of the nature of a powerful and stimulating tonic. Its intensity is, however, under complete control, and may be regulated to a proper degree.

The description of other methods of administration will be found in the work from which this chapter is taken.

Surgery.

IN CHARGE OF

DR. T. H. MANLEY, New York.

PERMANENT RESULTS AFTER ALEXANDER'S OPERATION.

Kuster gives the results of 14 cases treated by Alexander's operation for prolapse and retroflexion of the uterus at periods varying from one to seven years.

In four it was performed for prolapsus and in 10 for retroflexion.

In the cases of prolapsus a plastic, vaginal operation was combined. He had in this group one relapse in one year. In the retroflexion he had two relapses, which he attributed to the uterus being somewhat fixed at the time of operation.

In all the cases the hypertophic metritis rapidly disappeared after operation. Our author believes that this operation is to be preferred to all others in appropriate cases, as where there are no adhesions and the case is not too chronic.—Octave Pasteau (Annale De Medicine, Mai, '95).

ENDOTHELIOMA OF THE OVARY.

Between tumors of an epithelial origin and those derived from the connective tissue elements in many cases the distinction is not very clear. Certain tumors partake of each of those characters without being positively allied to either, as dis- and Marchand. These authors describe a tumor of the ovary which presents two characters, which they designate an endothelioma. They believe that its endothelial elements arise from the blood vessels and lymphatics of the connective tissue. Marchand has studied 12 cases of this type of neoplastic formation in the ovary. These endothelial elements are found in papillomatous cysts of the ovary, and in the broad ligament. When an endothelial tumor of the ovary is a primary formation it may be recognized by the naked eye. Its volume varies. It is always highly vascular.—Annales Med., Mai 12, '95.

CLINICAL FORMS OF APPENDICITIS.

BY DR. OBRATSOFF.

(Annales de Med., Juin, '95.)

There may be classified five or more forms of appendicitis from a clinical standpoint:

Appendicitis from colicky contraction of the appendix—This is provoked by the passage of a hard body through the appendix, causing a contraction of the muscular tissue. The symptoms are pain, perhaps, localized in the iliac fossa or the umbilicus, attended with vomiting. The temperature is often normal. There is no tumefaction or tympanitis. The duration is from a few hours to one or two days.

Catarrhal appendicitis succeeds in consequence of an excess of adenoid tissue in the appendix, leading to stenosis or obliteration. Its duration is short. Pain, vomiting and fever are present. There is no tumor, sonorous note or percussion; local pain relieved by pressure.

Peri-appendicular appendicitis—In this type inflammation involves the peritoneum and adjacent organs. Its etiology varies from fecal impaction to microbic invasion. It produces an adhesive inflammation, gluing the neighboring parts together and thus producing a tumor. Clinically it is recognized by pain, this in many cases having, a hepatic or gastric character; vomiting and constipation are present, rarely diarrhea. Fever, with the initial chill, often initiates this grave type. Here we will find an intumescence of the abdominal integuments with tympanitis. Fetid breath and great thirst are usually present. This form may last from a few days to three or four weeks. This inflammation tends to propagate itself in two directions, along the ascending and transverse colon and

through the sigmoid flexure—as perityphillitis and perisigmoiditis.

Perityphillitis—Tumor resistent and painful, situated along the right iliac fossa. Its duration is about the same as appendicitis.

Perisigmoiditis gives rise to pain in micturition and defecation. There is always a fullness along the left iliac fossa, with an extension of it over the bladder.

Perforating appendicitis may be rapid or slow. With it generalized peritonitis is frequent, when local symptoms disappear and alarming constitutional disturbances set in. When its advent is gradual a plastic deposit will wall off the general peritoneal cavity, though the purulent accumulation may so far burrow and spread as to make its way upward through the diaphragm and out through the umbilicus, or it may drain off by the bladder or the rectum. The differential diagnosis between simple and perforative appendictis is sometimes exceedingly difficult. The suddenness and the intensity of the phenomena which announce it are what must be chiefly relied on. In ichorous-appendicitis rapid perforation follows mortification, with general infection of the peritoneal cavity.

The origin of this grave type may sometimes be recognized at its outset. Its general characters are those of peritonitis, with acute prevalent infiltration. In these uncommon cases death is almost inevitable.

CASTRATION FOR PROSTATIC HYPERTROPHY.

Kummell (Berl. Klinik, August, 1895), in a lecture on the operative treatment of enlarged prostate, reports eight cases of this affection in which he performed double castration. The operation was followed by considerable relief in these cases, but one patient, aged 77, died from exhaustion after an interval of four weeks. In a review of his own cases, and those published by other surgeons, he states that in a large majority of instances of senile enlargement of the prostate White's operation is certainly followed by a more or less rapid shrinking of the prostatic tissue. This result of double castration in most cases enables the patient to dispense with the use of the catheter, and to discharge urine spontaneously. The bladder troubles also are much relieved, and the general condition is improved. In the selection of suitable cases attention should be paid to the condition of the muscular structure of the bladder. If the detrusor muscle be paralyzed to such an extent that the bladder cannot be completely emptied, even by the use of a catheter, it would be useless to expect a restoration of normal function as a result of removal of the obstruction to the flow of urine. In two of the cases here recorded, however, good results in this respect were obtained in spite of considerable weakness of the detrusor. In many cases the diminished size of the prostate after double castration permits of the more ready introduction of a catheter, and thus wards off the dangers of retention. In the author's opinion, the treatment of hypertrophy by double castration compares favorably with other operative measures in being simpler in performance and less dangerous. It can be performed without subjecting the patient to the risk of general anesthesia, and necessitates but a very short stay in bed, which with regard to old and enfeebled subjects is a very important point. The operation, it is stated, should be recommended only to those whose sufferings have attained a high degree, and can no longer be relieved by mere symptomatic treatment. The author met with no objection to the operation from any of his patients, all of whom were well satisfied with its results. The recorded instances of success are so numerous and striking that the author has been led to the conclusion that the surgeon is certainly justified in suitable cases of enlarged prostate in advising and performing this operation. Although a more extended series of observations is needed before a clear and absolute judgment

can be formed on this new method, there can be no doubt, the author holds, that this procedure is a valuable addition to the operative means of dealing with advanced and grave forms of prostatic hypertrophy. The observations with regard to the influence of unilateral castration on the growth of the prostate are very contradictory, and further information is needed before any definite conclusion can be reached on this question.

THE PROTECTION OF THE INTERNAL ORGANS IN GONORRHEA.

Auvard (Arch. de Tocol. et de Gynec., June, 1895) strongly objects to the use of the curette in the course of acute gonorrhea. Theoretically the practice seems justifiable, but experience has proved that it is one of the surest ways to cause extension of the disease to the tubes and ovaries. After the use of the curette, a minute piece of infected glandular tissue may be left behind. The entire surface of the uterine cavity may be disinfected by and after the scraping, yet then the mucosa, which acts as a rampart against microbic infection, has been destroyed. The probable entrance of specific pus from the vagina, an accident difficult to avoid, sets up uterine gonorrhea of a type worse than the first attack. The parametrium under these circumstances, is very liable to be invaded through the open and damaged lymphatics. In order to prevent inflammation of the tubes and ovaries complete rest must be enforced. The great danger in gonorrheal salpingitis is sterility, and as in married women the fact of infection is a source of great misery, the patient's mental annoyance is much aggravated by the subsequent complications which render her barren. In the early stage of gonorrhea the more timid our surgery the better for the patient. The uterine cavity is best left alone. The vagina and cervix should be swabbed with a 1 per cent. solution of nitrate of silver once or twice a week, and a 1 in 1000 solution of sublimate employed as an injection twice daily. In the early stage of inflammation of the appendages Auvard recommends ice. It should be broken in small pieces, mixed with a little salt, placed in an India rubber bag and applied to the tender hypogastrium or iliac fossa. A double layer of flannel should be laid on the skin to protect it from the ice. When the pain is less and the other symptoms mild, blisters will be sufficient. The patient must not get up till a day or two after all pain has passed off. Glycerine plugs must then be applied about three times weekly. By such methods, used in time, sterility and the need of removal of the tubes and ovaries may be averted.

Medicine.

IN CHARGE OF

Dr. E. W. BING, Chester, Pa.

INTERNAL USE OF COCAINE IN WHOOPING COUGH.

Wells and Carre (Sem. Med., June 19) have treated some 300 cases of whooping cough by the internal administration of hydrochlorate of cocaine in doses varying from 4 milligrammes in infants of 8 months to 2 centigrammes in children of 5 or 6 years. These doses were given three times in the 24 hours. The treatment had a very favorable effect on the symptoms and course of the disease. Vomiting was checked, appetite returned, the attacks of cough diminished both in frequency and in intensity, sleep was less disturbed and the duration of illness was markedly lessened, the disease being cured, as a rule, in three weeks, sometimes in a fortnight. Cocaine is generally well borne by children. The only disagreeable effect occasionally noted is looseness of the bowels, which, as constipation is a frequent accompaniment of whooping cough, the authors think an advantage rather than otherwise.

ICHTHYOL IN THE TREATMENT OF PHTHISIS.

Scarpa (Rif. Med., March 6, 1895) communicated to the Medical Society of Turin the results obtained by him in the treatment of 150 cases of pulmonary phthisis with sulpho-ichthyolate of ammonia. Of the 150 cases so treated, 23 died, but these were already in a desperate condition when the treatment was commenced; 17 are at present cured to all appearance, having no subjective symptoms, and objectively only such signs as may be called the inevitable relics of the disease; 50 are much relieved and in a fair way to recovery; 32 show an improvement less marked, but still evident; 28 show as yet no appreciable change. Contrary to what is observed with guaiacol and creasote, the improvement begins with the special symptoms—for example, cough, expectoration, pain; improvement in the general symptoms, appetite, strength, fever, and sweating, comes later, after two or three weeks. The author uses a 30 per cent. solution in water, glycerine or alcohol, of which he administers 20 to 200 drops daily in water.

Three peculiar accidents are reported in the France Medicale, as follows:

A waiter in a cafe, overcome with lust and not having the natural means of satisfying it at hand, used the neck of a decanter as a substitute for a vagina. He had no knowledge of physiology and dreamed of no mischance; so his astonishment and fright were great when, the operation ended, he found he was "fast." To add to his troubles the bell, summoning him to the bar, rang furiously. He could not go before his customers with a decanter attached where it had no business to be, and he took the chances, smashed the bottle and escaped with a wound which caused a free hemorrhage, but released his penis.

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2. In a small town in the south of France a husband and wife were surprised one evening to find the lamp chimney missing. Their son, 18 years old, had gone to bed complaining of colic, and the doctor was sent for. As the latter entered the room the young man made a sign for silence. The parents were asked to leave the room, and then an examination disclosed the fact that the young man had made use of the lamp chimney and its disappearance was at once explained. Sending for a diamond the doctor restored at once the lamp chimney and his patient.

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3. A young lady had been warned against the terrors of syphilis, and was afraid of contracting it if she allowed her desires full play. She, therefore, made use of a lamp chimney in lieu of the virile member, with the result that she soon had a troublesome ulceration of the vagina. Recognizing the cause, she gave in to her lover's wishes, and the previous use of the lamp chimney saved him the trouble of forcing a passage.

A paper by Dr. Marchae, in the Revue Medicale, treats of the subject of poisoning. He says that the subject is generally considered from a medico-legal standpoint, but his aim is to treat the subject briefly, considering the mode of action of poisons, their character, symptoms and treatment.

The mode of action is double—local and general. The local action predominates in only a few poisons. It is limited in extent, depending on their coagulating capacity. General action is at the same time the proof, and the consequence of their absorption.

The effect of a poison is influenced by factors modifying absorption, such as the form in which the poison is taken, the degree of fullness of the stomach, whether the substance is taken in a solid or liquid state, etc.

Symptoms and diagnosis of poisoning—These symptoms are very various, but there are some prominent ones nearly always present. What strikes one first in acute poisoning

is the "sudden" attack and the impossibility of grouping the symptoms to resemble those of a determined disease, although they do simulate sometimes the symptoms of violent irritation or inflammation of the alimentary passages or a profound impression on the nervous centres. Bystanders can generally furnish important information as to "how it happened" when several persons are taken ill after a common meal, and the question explains itself.

The time which has elapsed since the ingestion has an important bearing also in a decision as to whether the person is poisoned, as do the habits of the individual, his remarks previous to taking the article. Where no information can be obtained the diagnosis must be arrived at by exclusion. If poisoning is present we must adopt and carry out a rational treatment, and to do this we must endeavor to find out what the poison is by an examination of the materials vomited. There is no time for a clinical or microscopical analysis. The first thing to be determined is whether the substance is acid or alkaline. This may be settled by the use of litmus paper. The next step is to see if the vomited matter can be recognized by the eye or by the lens.

The color of the vomit is sometimes of great assistance, especially in the case of the colored chemicals. Odor is often characteristic. Taste, if one cares to make use of the function, is often of great service. The characters of the stools, if any, must also be watched.

Treatment—In most cases the stomach is to be emptied by vomiting produced by drugs or by titillation of the throat; draughts of tepid water, with mustard or sulphate of zinc, ipecac or emetic. Some substances change the mucous membrane of the stomach so much that the emetic must be given simultaneously to make it act; the drug for these cases is apomorphine. The stomach should be washed out by the pump if possible, except where the substance is strychnine, where the contact of the instrument produces such severe reflex spasm that it is impossible to introduce it. It is also contraindicated in the case of corrosive poisons.

The mineral and chemical poisons have usually an antidote, which must be chosen for an opposite reaction to the substance taken. Iodine is an excellent antidote for the alkaloids, 10 to 20 drops every 10 minutes in water. Coffee, tannin, dogwood are also of service in cases of alkaloidal poisoning.

Miscellany.

INTESTINAL HEMORRHAGE AFTER HERNIOTOMY.

Fikl (Wiener Klin. Wochenschrift, June 27, 1895) reports a case in which 16 days after herniotomy for strangulated left inguinal hernia melana occurred. The knuckle of the small intestine at the operation was of a deep red color, and the constriction tight, but the peritoneum was still smooth and glossy, and the fluid in the sac clear. On the third day after operation scybala were removed from the rectum with a spoon, and on the following two days copious normal evacuations resulted from enemata and calomel. The treatment of the hemorrhage was ice to the abdomen and ergotin internally, with the result that the stools were natural four days later. The cause was probably necrosis of a small piece of mucous membrane at the seat of constriction, which had existed three days before the operation. There were no gastric symptoms. Albert (ibid., No. 22) regards such cases as very rare, but Fikl thinks they may be commoner than is generally supposed.

ROSE'S OPERATION FOR TRIGEMINAL NEURALGIA.

Eskridge and Rogers (American Journal of the Medical Sciences, July, 1895) report a case of neuralgia of

the right trigeminal nerve of eight years' duration treated with success by excision of the three divisions at the Gasserian ganglion, and partial destruction of the gland itself. The patient was a man, aged 45 years, on whom an operation was performed by Rogers in 1892 for partial excision of the right inferior dental nerve. This operation gave complete relief for a time, but four months later the suffering became so intense that the patient threatened to commit suicide. In May, 1893, Rogers again operated, and on this occasion the Gasserian ganglion was exposed by Rose's method. The operation proved to be a very difficult one. The manual labor of the first part was very trying, as there was considerable and continuous oozing of blood, and in dealing with the ganglion the operator had to trust to the tactile sensation of his fingers, as he was unable to see the deep-seated parts of the wound. The substance of the ganglion, it is stated, was completely dismembered by a sharp hook and other instruments. Although no antiseptics were used on the wound or on the dressings the recovery, though retarded, was very satisfactory. In August, 1894—about fifteen months after the operation—the patient had had no return of the pain. Eskridge, who examined the patient in September, 1893, found that he had gained several pounds in weight since the operation and was quite well. The first division of the trigeminal nerve he found had not been completely divided. Taste was absent in the right anterior portion of the tongue, whilst smell was present and equal on the two sides.

RENDER THE INTESTINAL CANAL ANTISEPTIC.

The Materia Medica gives at least one safe intestinal antiseptic. It is salol. Professor Hare, in the last edition of his Practical Therapeutics, says that salol "renders the intestinal canal antiseptic, and so removes the cause of the disorder, instead of locking the putrid material in the bowel, as does opium." He regards salol as "one of the most valued drugs in the treatment of intestinal affections." Have we a substitute for opium for the relief of pain? Here comes in the American coal-tar products in the first of which for the relief of pain stands antikamnia. Therefore, we conclude that to remove the cause, to render the intestinal canal antiseptic, we have an invaluable remedy in salol; while to remove accompanying pain, to quiet the nervous system, and to reduce any fever which may be present, we have a remedy equally efficacious in antikamnia—an ideal combination for the treatment of this large class of diseases, and we may specially cite typhoid fever. These two drugs are put up in tablet form, called "antikamnia and salol tablets," each tablet containing two and one-half grains of antikamnia and two and one-half grains of salol.

ANTISEPTIC GAUZE.

The subject of gauze dressings, and especially a consideration of what is the proper standard for gauze, has recently been very much discussed. A very good readable summary of the question is contained in a monograph of 24 pages issued by Johnson & Johnson, in which is discussed gauze cloth, its nature and use. Quality required for surgical dressings. Comparison of gauze used by various manufacturers and hospitals. Authoritative processes and formulas as given in hospitals. Authoritative works including those for the manufacture of Linton moist gauze. Standard for gauze as discussed by leading authorities, including Lister's standard, and a discussion of the finished basis and a standard strength based upon the strength of the solution adjusted definitely to the measure and weight of the gauze; with opinions of various surgeons as to a proper standard. The book also contains a discussion of moist and dry dressings, and an explanation of the so-called "comparative tests" for gauze.

IS TOTAL EXTIRPATION OF THE RECTUM EVER JUSTIFIABLE.*

*JOSEPH M. MATTHEWS, M. D., LOUISVILLE, KY.

All malignant growths affecting the anus first should be removed, if seen at the the proper time. If a growth of this kind is situated in the immovable portion of the rectum, and has not extended higher than this, or has not invaded vital strucures, the surgeon can remove it, observing the injunction to "cut wide of the mark." But this is a very different thing from removing the entire rectum and that, too, when no promise can be given.

I have written after a fair trial of all methods proposed for the total extirpation of the rectum. And I have usually seen these patients go on from bad to worse. I must confess that some remorse of conscience has overtaken me when the question stared me in the face, why did I do so formidable an operation, when in truth there was no good surgical reason for doing it. This is an unfortunate class of patients, the most unfortunate of all, and they do indeed catch at straws. They need our fullest sympathy, and nothing less than a firm conviction that we can either cure or materially benefit them, should lead the surgeon to do so radical an operation as the total extirpation of the rectum. Can we promise either?—(From Med. and Surgical Reporter.)

AMERICAN DERMATOLOGICAL ASSOCIATION.

Programme of the nineteenth annual meeting, to be held at the Windsor Hotel, Montreal, Canada, September 17, 18 and 19, 1895.

FIRST DAY.

Tuesday, September, 17, 1895. Business meeting (with closed doors) at 9.30 A. M.

Report of council.

Nomination of officers for the ensuing year.

Appointment of Auditing Committee.

Proposals for active and honorary membership.

Miscellaneous business.

SCIENTIFIC SESSION (open meeting) at 10 30 A. M.

1. Address by the president, Dr. S. Sherwell.

2. Angiokeratoma of the scrotum; Raynaud's disease of the ears; report of cases, Dr. J. A. Fordyce.

3. Two cases of hydroa vacciniforme, Dr. J. E. Graham.

4. Two cases of bromide eruption, Dr. G. T. Jackson.

Adjournment at 1 P. M.

SCIENTIFIC SESSION at 3 P. M.

5. The value and limits of usefulness of electrolysis in dermatology.

GENERAL DISCUSSION.

6. Dermatological notes, Dr. W. A. Hardaway.

7. The epitrichial layer of the epidermis and its relationship to ichthyosis congenita, Dr. J. T. Bowen.

Adjournment at 5 P. M.

SECOND DAY.

Wednesday, September 18, 1895. Business meeting (with closed doors) at 9.30 A. M.

Report of treasurer and Auditing Committee.

Election of officers.

Election of active and honorary members.

Selection of time and place of next meeting.

Miscellaneous business.

SCIENTIFIC SESSION at 10.30 A. M.

8. Remarkable drug eruption, Dr. F. J. Shepherd.

9. A hitherto undescribed sequel of non-parasitic sycosis, Dr. J. A. Cantrell and Dr. J. F. Schamberg.

10. The infected scratch and its relations to impetigo and ecthyma, Dr. H. G. Klotz.

11. A contribution to the study of mycetona, Dr. J. N. Hyde.

Adjournment at 1 P. M.

AFTERNOON MEETING at 3 P. M.

12. Unusual papulo-pastular and fungating bromide of potash eruption in a baby, illustrated, Dr. G. T. Elliot.

13. An etiological puzzle, Dr. J. C. White.

14. Studies on some dermatological subjects, Dr. A. R. Robinson.

Adjournment at 5 P. M.

THIRD DAY.

Thursday, September 19, 1895. Morning session at 9.30 A. M.

15. A unique case of agminate folliculitis of parasitic origin, Dr. M. B. Hartzell.

16. Note on antiparasitic treatment of eczema, Dr. J. Zeisler.

17. Treatment of erysipelas based upon a second series of fifty cases, Dr. C. W. Allen.

18. Note on drug eruptions, Dr. J. A. Fordyce.

19. A further study of alopecia praematura and its most frequent cause, Dr. G. T. Elliot.

Adjournment at 1 P. M.

AFTERNOON SESSION at 3 P. M.

20. The prevalence of germ dermatoses, Dr. J. C. White.

21. Symbiosis of cutaneous eruptions, Dr. J. Zeisler.

22. Sleep in its relation to diseases of the skin, Dr. L. D. Bulkley.

23. Exhibition of photographs of unusual cases, Dr. H. W. Stelwagon.

24. (Title to be announced), Dr. S. Lustgarten.

25. Urticaria pigmentosa. Case twenty years under observation, Dr. P. A. Morrow.

26. Note on the elastic circular bandage, Dr. G. H. Fox.

Adjournment.

It is a matter of some interest to physicians to learn that the Columbia Chemical Company, of Washington, D. C., in their litigation with Dr. William A. Hammond have come out ahead. The Courts have restrained Dr. Hammond, The Hammond Sanitarium Company, Dr. Mahlon Hutchinson and Dr. Hammond's son-in-law, Mr. Lanza, from manufacturing, advertising or selling the Animal Extracts. It appears that Dr. Hammond sold the sole right to these products, together with the use of the name, to the Columbia Chemical Company, but endeavored later to give the right again to the Hammond Sanitarium Company, in which Dr Hammond is a large stockholder. The Columbia Chemical Company, however, have fought the case with vigor, and have had their rights, under their contract with Dr. Hammond, upheld in every particular by the Courts. During the proceedings in Court it developed that the formula of the Animal Extracts is a secret, and is held only by Dr. Hammond and the Columbia Chemical Company.

Official list of the changes of station and duties of medical officers of the U. S. Marine Hospital Service for the fifteen days ended August 15, 1895.

Wasdin, Eugene; P. A. Surgeon. Granted leave of absence for ten days, August 1, 1895.

Williams, L. L.; P. A. Surgeon. To proceed to South Atlantic Quarantine Station for temporary duty, on being relieved by Assistant Surgeon E. Prochazka, August 6, 1895.

McIntosh, W. P.; P. A. Surgeon. Granted leave of absence for thirty days from September 1, 1895—August 5, 1895.

Magmder, G. M.; P. A. Surgeon. To assume command of small-pox camp, Eagle Pass, Tex., August 10, 1895.

Geddings, H. D.; P. A. Surgeon. Granted leave of absence for thirty days, on being relieved by P. A. Surgeon L. L. Williams.

Brown, B. W.; P. A. Surgeon. To proceed to New London. Conn., as Inspector, August 15, 1895.

Rosenau, M. J.; P. A. Surgeon. To proceed to Eagle Pass, Tex., for temporary duty, August 4, 1895.

Nydeggan, Jas. A.; Assistant Surgeon. To assume charge of Detention Camp, Waynesville, Ga., in addition to other duties, August 14, 1895.

Rochazka, E.; Assistant Surgeon. To proceed to Charleston, S. C., for temporary duty, August 6, 1895.

Dr. Frank Parsons Norbury, who recently removed to St. Louis to assume the editorial management of the Medical Fortnightly, has been elected to the chair of Practice of Medicine and Clinical Medicine in the St. Louis College of Physcians and Surgeons.

The Times and Register.

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Original.

THE INFLUENCE OF HEREDITY ON IDIOCY.

BY MARTIN W. BARR, M. D.,
Chief Physician, Pennsylvania Training School for Feeble-Minded Children, Elwyn, Delaware County, Pa.

Throughout the history of education and of medicine no point has so engaged the attention of the philosopher and the scientist as the influences of environment and heredity. These influences upon our physical being, repeated through successive generations, resolve themselves into law, a law as unalterable as that of the Medes and Persians—a law founded upon fundamental truths and verified in the experiments of physiological science.

The aim of educational and medical science is one, viz., to secure to the individual a sound mind in a sound body, so that all that touches one must find its prototype in the other. In this more than aught else, if one member suffer, all the members suffer with it.

This law of balance and proportion we recognize in the forces of Nature, in the applied arts and sciences, and we are quick to note the evil effect of the least deviation from this rule.

In a nature so complex as man—a mechanism so finely ordered—none deny that the same principle is but intensified.

Here, therefore, in natural sequence, the psychological follows the physiological research, nay rather joins hands in this effort to restore health to the mind or to prevent degeneration; and, acknowledging the sins of the father transmitted in the body to the third and fourth generations, would fain seek in the springs of life itself the influence of heredity upon the mind—the secret and causes of idiocy. Most arrogantly we call ourselves "the heirs of all the ages" in all good gifts, but we are slow to acknowledge the serpent's trail in our Eden. Our vanity is sensitive, and recoils naturally from the thought of blemish in our own—physical or mental—an ancestry, either ignoble or unfortunate. We do not, and we will not, except under protest, receive the law of heredity of ill.

Convinced that it is logical, still we seek proof in statistics. The gathering of statistics under these circumstances is difficult. Parents and friends are loath to accept such evidence, and, actuated by false shame, still more loath to impart information, especially when there is neurotic taint. The physician in many cases, feeling that he is betraying a confidence, keeps no record, and the literature on the subject becomes, therefore, most meagre. Thus, when we begin to sift the matter as we should like, we are frequently unable to verify our conclusions. So in many cases the causes of idiocy remain unexplainel, closeted within the secret recesses of nature.

But the field of research, with all its difficulties, is broad and is practically unexplored. Before going into statistics, however, let us consider for a brief space opinions of deep thinkers on this subject.

Mercier says: "The first and most fundamental law of heredity is that every attribute of the parents tends to be inherited by the offspring. Inheritance is the law, non-inheritance the exception." You will observe that he does not say they are, but that they tend to be inherited, and the question therefore resolves itself into this, either the offspring does or does not resemble its ancestors. If the former, then there is an hereditary law; if the latter, there is not.

Strong as this is we find in Montaigne a stronger thought:

"Is it not marvelous that this drop of seed from which we are produced should bear the impression not only of the bodily form, but even of the thoughts and inclinations of our fathers? Where does this drop of water keep this infinite number of forms? and how does it bear these likenesses through a progress so haphazard and so irregular that the great-grandson shall resemble the great-grandfather?"

Blandford says: "Two laws of nature are concerned in the production of these phenomena. One is that peculiarities and abnormalities are apt to recur in descendants for many generations; the other, that there is always a tendency to return to the type of health in beings which have sufficient vitality to perpetuate their existence and carry on their race for successive generations."

We do not always produce an idiot from a neurotic family.

Again, one or even more of a family may be insane or idiotic, the others normal, showing the taint concentrated, due possibly to surrounding conditions and temperament of parents at time of conception combined with pre-natal influences upon the mother.

Thus every idiotic child bears the mark of some inherited tendency from some ancestor.

I will here cite a case among my own patients, where a male idiot born of imbecile parents possesses the face and form of the mother with the disposition of the father, a type of both physical and moral imbecility.

Neuroses are frequently interchangeable in transmission from generation to generation, and there are two great laws—the reversion to the original healthy and perfect type when the taint is less noticeable in generations until it at last is not found at all; or it becomes more pronounced, and a simple nervous disease may appear in successive generations in the form of a pronounced neurosis.

From Ireland we have the following: "Of all known diseases perhaps idiocy is most frequently propagated by heredity."

Moreau, of Tours, affirmed that heredity was found in nine-tenths of his cases, but gave no statistics.

According to George Wallington Grabham, heredity is the chief agent in the production of idiocy. Although in his statistics he collects but 18 per cent., he is convinced that the taint exists in a far greater proportion.

Dr. Shuttleworth, in a recent personal letter, writes: "My opinion is that heredity plays a very important part in the production of idiocy, though we cannot prove the frequency by statistics so completely as the fact is impressed on one's mind by intercourse year after year with the relations of acknowledged idiots and imbeciles.

"Taking only the friends' statements, we should be much misled, and for that reason I declined when at the Royal Albert Asylum to publish each year any table of causes. . . . But as one got to see more of the relatives, one gradually accumulates a considerable body of evidence, and this has been summed up and compared with Dr. Beach's experience at Darenth." These observations are as follows: The most frequent hereditary factor is phthisis, which is found existing in 28.31 per cent.; inherited mental weakness, 21.38 per cent. (16.47 per cent. family history of insanity, 4.69 per cent. family history of imbecility), whilst in 20 per cent. there was a family history of neurosis.

Fletcher Beach subsequently made some further studies alone at Darenth, and found heredity in 76 per cent. of these cases.

In 1856 the Legislature of Connecticut appointed a commission to investigate the causes of idiocy. The questions propounded were as to whether there had been idiocy, insanity, blindness, deafness, epilepsy or any other defect, mental or physical, in the immediate or collateral family of the idiot.

The commission reported that out of 164 cases it found 70 where heredity was undoubtedly the cause; in 10 cases idiocy in the parents; in 6 in the various relatives; 6 insanity in parents; 8 insanity in relatives; in 8 epilepsy of parents or relatives; in 2 blindness; 1 melancholia in father; 13, dementia following insanity in relatives; and in 16 one or more of the defects mentioned, but not designated.

In the census of 1873, taken at Berne, 55 per cent. of the idiots came from neurotic families.

Dr. Langdon Down, who has made an interesting series of investigations in 2000 cases, reports 45 per cent. as caused by various neurotic affections in one or both parents. If the mother were afflicted, the first children born were the sufferers; if the father, the later children.

Haller cites the cases of two imbecile women of noble birth and immense wealth who married, and many of whose descendants for more than a century, even to the fifth generation, were idiots.

Esquirol reports the case of an idiot woman at the Salpetriere who bore three idiot children.

Dahl made careful comparative studies of the ancestry of 169 idiots and 151 insane. In the former he found 84, or about 50 per cent., had insane relations. In the latter there were 58, or about 38 per cent., whose relatives also presented marked symptoms of idiocy and insanity. Of these the parents of 18 insane and 21 idiots, about 12 per cent., also exhibited some mental defect.

Of the idiots there were 2 cases where both parents were mentally tainted, 6 where the father, 4 where the mother, 4 where some or all of the grandparents, and 5 where the great-grandparents were afflicted with mental disease.

It will be noticed that the great-grandmothers predominated in transmitting the taint, but Dahl gives no explanation of this.

Dr. James R. Dunlop reports the case of a weak-minded father and mother who had seven imbecile children. He was so much interested in the case that he made a number of careful investigations. For four generations there had been some evident neurotic taint, but it was not marked in the third. The progenitor was a neurotic, and was married to a fairly intelligent woman. To them were born four children, three males and one female. The female was an imbecile, and had a son, in no way peculiar, born out of wedlock, but whose father she subsequently married. She had no other issue.

Of the males, one is reported sane, one feeble-minded and another eccentric, if not imbecile. He married a healthy woman eleven years younger than himself. They had eleven children, seven of whom were imbecile or idiotic. One, Jean, has had an illegitimate daughter who was said to be normal. One, Thomas, a hypochondriac, was said to be peculiar in looks and manner, but not weak-minded. He married a sensible woman, and had an imbecile child. James, sane, but peculiar in manner, irritable and fretful, had eight children perfectly healthy.

Fletcher Beach also quotes an interesting case where the predisposition can be traced through four generations.

G. B., aged 15 years, an imbecile, paralyzed on left side. Her great-grandfather was not in full possession of his senses. The grandfather was reserved, and the grandmother excitable and peculiar. The father was a neurotic, ill-tempered and morose. The father's two brothers and one sister exhibited no peculiarity, but the oldest children of both brothers exhibited the same peculiarity as the patient (G. B.). The sister's oldest child is also peculiar. From the father spring G. B., whose eleven brothers and sisters died of spasms during dentition. It will be seen by this that the neurosis running through the family touches the

third generation but lightly, and intensifies itself in the fourth.

Two family histories of my patients are interesting studies in heredity:

A. B., apathetic idiot. Huntingdon's chorea has existed in mother's family for many generations. Maternal grandmother choreic, maternal grandfather phthisical. Of this marriage there were born seven children; the order of birth, ages and sex unknown, with exception of mother of A. B. Three alive and married, and extremely nervous. Have children said to be normal in every respect. The four deceased children, including mother, died of chorea.

Paternal grandfather and grandmother both strong and healthy, and lived to unusual old age. Their issue consisted of nine children, sex, age and order of birth unknown. All healthy.

The mother of A. B. was always delicate, and three days after marriage was attacked by chorea, of which she died after twenty-three years. She had eight children, the two oldest—male and female—said to be normal. Both married and have healthy children. Third, female, deaf and dumb; fourth, male, imbecile; fifth, A. B., female, idiot. Three children born after this, of whom nothing is known except that they died in early infancy of epilepsy, diarrhoea, and one was stillborn.

H. W., high-grade imbecile, eighth child, first born of twin in a family of fifteen, nine of whom are dead; four from convulsions in infancy, two stillborn, one from scarlatina, and two, including patient, of meningitis. Of the six children living, five are said to be normal, and one a shameless harlot, who is practically a paranoiac. Both father and mother came of pronounced neurotic families.

Father peculiar, morose, intemperate, and died in 51st year of apoplexy. His first cousin was an imbecile.

Mother is considered very peculiar.

Howe tells of three towns situated in close proximity to each other in which are a number of families where both parents and children are imbecile. He tells also where an indigent female idiot living in one town married, with the sanction of the town authorities, a male idiot, who was not a pauper, with three idiotic children as a result.

Dr. Isaac N. Kerlin, my master in the work, in 1880 presented a valuable paper on the "Causation of Idiocy based upon the Analysis of One Hundred Idiots and Imbeciles." He found 28 per cent. were caused by insanity and feeble-mindedness, and 57 per cent. by various nervous diseases.

In my own experience, based on a careful examination into the family history of 1044 idiots, I find 397 families, or 38 per cent., with a history of insanity or imbecility, and 225, or about 21 1-2 per cent., various neuroses.

There is one point so nearly allied to our subject as to demand at least a passing consideration.

Consanguinity is commonly accounted a fruitful cause of idiocy, but comparative investigation shows, first, children having both mental and physical defects, the offspring of healthy unrelated parents; second, perfectly developed children with no personal peculiarities whatsoever, the issue of consanguineous marriages. This would lead us to accept the statement that consanguinity has but little if any influence in the production of idiocy, unless there be some hereditary neurosis.

Heath maintains that if the blood be pure and uncontaminated there will be no bad results from such marriages.

A confirmation of this may be found in the history of the Hebrews, which gives repeated examples of consanguineous marriages where the intermingling of pure blood gives only good results, and idiocy is the exception rather than the rule.

The statistics that I have been able so far to gather run thus: In 1865 the poplation of Batz, Brittany, numbered 3300. Five marriages took place between cousins-german, thirty-one between second cousins, and ten between those of third degree.

The issue of the cousins-german was twenty-three children, free from all disease, both mental and physical.

The second cousins had 120 children, normal in every respect, and the issue of the cousins of the third degree were twenty-nine children, also perfect. Two women were sterile. But insanity, idiocy and nervous diseases were unknown in this community.

Dr. Kerlin found but 7 per cent. of his cases examined directly traceable to consanguinity.

In my own examination of 1044 idiots, I find but 3 1-3 per cent. On the other hand, consanguineous marriages where there is the least neurotic taint must always be marked by deterioration of mental power. Naturally, if the taint exist in both parents, the force is but intensified, and idiots are likely to be produced with peculiarities accentuated. A notable example of this is found in Switzerland, where, among the people secluded from the outer world in mountain fastnesses, intermarriage has been going on for centuries. Here, by repeated intermarrying, neuroses are preserved intact and idiocy ripens.

Among my own records I find an interesting case which I herewith present:

J. F., excitable idiot, born of cousins-german, in whose families were marked neuroses. Mother, always delicate, and finally died of phthisis. Father, emotional and silly to the verge of imbecility. The following is an account of their offspring: The family, a large one, numbered eleven in all. Four died in early childhood (diseases unknown), three living of whom I have no history, and four of whom I have records. First born, female, deaf and dumb; second born, female, epileptic; third born, male idiot; and the eighth born (patient), idiot.

Frequently idiocy appears as the outward and visible sign of the mental deterioration of a family where intermarriage has been frequent, especially one that has been noted for its intellectual qualities, and, according to Griesinger, it is a mark of degeneration in a race whose blood has stagnated, as, for example, in the Asylum of L., where many of the proudest names in England are borne by driveling idiots.

Esquirol says that it is simply impossible to enumerate the idiots in the noble families of France, among whom intermarriage is frequent, and also among the Roman Catholic families of England and Scotland.

We have considered to-night, not possibilities nor chimerical maybes, but grim facts gathered through years at much cost and pains, by patient, earnest, thoughtful, philosophic minds. Let us come up from their past with the lamp of experience they have placed in our hands to study the present and verify their conclusions.

What are the signs that tell of this enemy, who shall come in like a flood? What standard shall we lift up against him? It is said that the pulse of a nation's prosperity is found in its marts—the danger signals are read at its bourse.

Where shall we judge of the intellectual status of a nation but in its educational centres. Schools, colleges, universities multiply with unprecedented rapidity over a land which has just celebrated its fourth birthday among the centuries of civilization.

Through these corridors, out from these doors, press in mad haste for the arena of life, young men and maidens, warm blood, freighted in many cases so fatally with the miasma from some remote ancestor, often doubled and quadrupled in intensity by consanguineous marriages, waiting but for this unhealthy and artificial atmosphere to develop into abnormal growth.

Do we ask why are the hopes of fond parents so often blighted? What becomes of these fair buds of promise?

Go find the answer in those other schools which are growing apace in our midst, dotting from ocean to ocean our own fair land, while others stretch out appealing hands to us—schools, public and private, which offer no prizes, nor hope of diplomas, yet which are also multiplying with frightful rapidity in response to the agonized cry of the Rachels weeping for their children, and who will not be comforted, because they are not.

The attention of many medical men is drawn to the influence of intemperance in parents as a cause of idiocy. The statistics, however, prove too meagre and the statements too unreliable for us to base any definite conclusions.

The Connecticut commission found 32.34 per cent. My own experience shows 18.38 per cent.

Langdon Down lays special stress upon the intoxicated state of the father at the time of conception, an opinion advanced years ago by Toussenel, and verified in one instance in my own practice.

Ludvig Dahl agrees that to the abuse of brandy by the fathers, and also to some extent by the mothers during pregnancy, may be assigned the most important influence in the production of the large number of idiots in Norway.

Upon the influence of phthisis, held by many as an important factor, I have not entered, as it is largely embraced in the points already elaborated.

The last example I have to offer, and by far the most appalling on record, is that of the family known as "The Tribe of Ishmael," whose history, traced through a period of forty years, shows descendants of one unclean, neurotic man, multiplying by consanguineous marriages into two hundred and fifty families, numbering some five thousand individuals, whose continuous criminal record has poured over the Northwest a flood of imbecility and crime.

Can we, in face of such evidence, refuse to accept inheritance as one of the fundamental laws of life?

The mark of the beast is ever present—the spoor of the wild animal remains—and to-day we trace it not only to the third and fourth generation, but on ad infinitum.

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DEATH UNDER CHLOROFORM.

The recent death of a young child under chloroform was the occasion of introducing an important question as to the consent of the parents, says a recent issue of the London Lancet. The infant son of a laborer suffered from convulsions and difficulty of micturition, and on July 6, being then 12 days old, it was brought by a nurse to Dr. C. E. Duff, to whom we are indebted for notes of the case. Finding that the prepuce hardly permitted the passage of a probe he recommended circumcision, which was accordingly performed on July 8 at a district nursing home. Chloroform was administered; the child took it well, and was afterwards sent home. On July 15th some hemorrhage occurred from the suture on the dorsum having cut its way out and allowed the skin of the penis to come forward on the glans and form ex-

tensive adhesions. Dr. Duff told the mother to bring the child next day to the district home in order that this might be put right. She accordingly did so, and held the child on her knee during the operation. Chloroform was again administered, and the child took it as well as on the previous occasion. The adhesions were broken down with a probe, the skin was stitched to the corona and the bandaging was finished, when it was observed that the child (who had been coming to nicely) had ceased breathing. The pulse was still beating and the galvanic battery, artificial respiration, etc., were resorted to, but the patient did not revive. The child, though fully under chloroform, was never deeply under it, the total amount given being about two drachms on a towel in a hot room. The father afterwards informed Dr. Duff that another child of his aged eight months had already died in hospital under chloroform administered for the performance of a minor operation. There was no further confirmation of this statement, but if it be true it would seem to show that undue susceptibility to chloroform may, like other idiosyncrasies, run in families. The fact of this previous death was concealed by the parents, who feared that if it were known the operation would not be performed. An inquest was held, very much against the wishes of the parents, but it was exceptionally necessary, as they asserted that the operation had been performed without their consent. This statement, however, was contradicted by the nurse who attended the mother in her confinement, and whose evidence was to the effect that the mother had on five successive days urged her to have something done for the infant's relief. The mother further declared that she heard nothing about the use of chloroform on the first occasion until the child was brought home, and that she did not know that it was administered at the second operation. The coroner, however, pointed out that she must have seen the administration, and Dr. Duff stated that neither was any complaint made by the mother as to the chloroform nor was he informed before the operation that a member of the same family had already died under chloroform. If this had been brought to his knowledge an anesthetic would not have been given on the present occasion. At the post-mortem examination the body was found to be emaciated, but no organic lesions were discovered. The verdict of the jury was: "Death under chloroform properly administered in the course of a necessary operation."

ANGINA PECTORIS, GOUTY ARTHRITIS, AND DIABETES.

Ebstein, after relating in detail three cases, appends (Berl. klin. Woch, June 24, 1895) some remarks on the connection between these diseases. In two cases in which diabetes and gout occurred in fat individuals there were also anginal attacks. In one case gout preceded diabetes, but in the other the reverse was noted. Most often diabetes follows upon gout. Atacks of gout may alternate with the diabetic manifestations. Diabetes appears to be a more favorable disease in the gouty. In both cases the angina pectoris was the most troublesome complaint. The anginal manifestations occurred in the first case ten years after the first attack of gout, whereas in the other case the angina appeared at the same time as the diabetes, or even before it. Both cases were in the author's opinion genuine examples of angina pectoris. It is difficult to determine in these cases whether the angina was dependent on the diabetes or on the gout. In both diseases the anginal attacks may be of a functional character. In both his cases the author thinks that the angina depended on disease in the circulatory apparatus, as changes in the heart were noted in both cases, and probably aneurism in one of them. A sharp distinction cannot be drawn between angina caused by anatomical changes and that due to functional causes. The author has observed cases in which such anginal

attacks have existed during many years. The prognosis is, however, serious even if no change can be made out in the circulatory organs.

PAINFUL TEMPORARY PARALYSIS IN CHILDREN.

Brunon (Presse Med., June 29, 1895) discusses painful temporary paralysis occurring in young children. Out of 22 cases 2 had paralysis of the lower extremities, all others having the arm only involved. Out of 14 all but one were under 5 years old. In all there was an absolutely sudden onset, sometimes following the slightest traumatism; often no cause was observed. The paralysis is complete from the onset; amelioration is gradual. All passive movements are retained, all active movements are abolished, the arm hanging inert by the side. The child screams when the slightest examination is attempted. No anatomical lesion is found except occasional creaking of the joints. Recovery takes place in from 24 hours to a week. Most authors take the view that there are in such cases anatomical lesions, such as subluxation, stretching or twisting of ligaments. Brunon believes with Chassaignac that in the cases in question any idea of fracture, dislocation, or tearing of ligaments may be dismissed, as no deformity, ecchymosis or interrupted movement of joints can be found. A differential diagnosis is needed between this and the form of paralysis due to partial dislocation of the head of the radius, a pathognomonic sign of the latter being the impossibility of supination. In 17 cases of this nature 2 only held the arm hanging straight. In the 22 cases under consideration all hung limply by the side and could be freely flexed, pronated or supinated. The initial lesion may be an injury to ligaments, but examination fails to localize the injury. Pain is general from shoulder to finger tips. The condition appears to be due to a reflex inhibitory action, of which other examples are numerous, and which affords a rational explanation of the paralysis. Mechanical, emotional or psychical stimuli are known to produce such conditions. An intellectual factor, the memory of the initial pain, explains the persistent crying of the child, the fear of being touched. There is no pain when the child is not handled. Much depends on the influence of suggestion made by those in charge of the child. In one case in which Brunon was able to make a diagnosis before seeing the patient, he was able to manipulate the arm freely from behind a curtain, while on his attempting to do so openly the child at once began to scream. An analogous case is cited of a child who was not allowed to see his crushed finger for three weeks until the new nail began to grow. At the sight of it he cried as if in pain, and kept the finger extended, not attempting to use the hand for two days. The spontaneous cure of these cases as memory fades seems to corroborate the view advanced.

THE CHEMICAL PHENOMENA OF OSSIFICATION.

The chemical phenomena of ossification. Chabrie says: The transformation of the fundamental cartilage into bone corresponds to chemical reactions of which the following are the principal. A substitution of the group, N. H2 to O. H. and an oxidation. This change may be accomplished under the influence of ammonia or its salts in an alkaline medium acting on this substance. This, shown in the laboratory by the action of ammonia salts on chondrine, seems to be formed in the organism by the intervention of urea, and bone formation is formed by the intra-organic production of the urea, which is carried by the blood, and this latter acts by its histological elements on the chemical reactions of caleification of cartilage. We know that only ossifiable cartilage contains blood vessels, therefore the element of the blood must take an active part in ossification. Also we know that Carb ammonia destroys the blood globules and that the globules are found in the cartilage at the moment of ossification. As the salts of am-

monia have been shown necessary to the transformation of the organic parts of cartilage their presence in the growing bone cells is not doubtful and blood globules submitted to their action are destroyed, setting free lecethine, which is one of the preponderating causes of calcification.

If the forming bone contains lactic acid as in osteomalacia, the organic cartilage-forming material does not become collagene. Again acids suponify lecethine and decompose it into fatty acids. In osteomalacic bones a large part of the lime is replaced by magnesia.

Medicine.

IN CHARGE OF
DR. E. W. BING, Chester, Pa.

A CURIOUS JUDICIAL AFFAIR.

On the 21st day of January, M. E., Health Officer of Deux-Sevres, wrote the following prescription:

Chl. de Cocaine.....	0.01 c gm
Sacch.	0.08 c gm
Acetum (wine vinegar)	0.02 c gm

For a cachet. Send two.

The prescription was presented to M. B., a druggist, who, while considering it singular, filled it. On the following day the patient observed to the doctor that the medicine had no effect. The latter opened some of the cachets and said they were empty and accused the druggist of fraud. The police called in would not take action, as they thought the doctor might be mistaken. The pharmacist in the meantime entered suit for libel. The Court retained an expert, who found on analysis half the amount of alkaloid and the same of sugar. He attributed the loss to the action of the vinegar, which, without any remedial effect of its own (half drop doses), had destroyed the effect of the cocaine. The case went through several tribunals and ended by fining the doctor 200 francs fine for damages, which was raised by the Superior Court to 500 francs, and declared the pharmacist free from any blame in the matter.—La France Med.

TREATMENT OF ACUTE "INFANTILE" ENTERITIS.

Graucher says the clinical and therapeutic indications depend on the diet of the child at the breast, on the bottle or during weaning. All errors in diet must be remedied, as they are the frequent cause of enteritis.

If enteritis exists, intestinal lavage with a quart of boiled water is practised. The child is turned from side to side to thoroughly wash the bowels. For fetid diarrhea—Injection of 5 cgms. of calomel, and also by the mouth one drop of laudanum each hour. Vomiting is combated by stomach lavage. Watery diet of egg albumen—No food till diarrhea is stopped; where stimulants are required, champagne. In convalescence an absolute milk diet is given for the first day, with boiled or sterilized milk, in tablespoonfuls every hour. The quantity is increased every day until the normal quantity per day is taken. After this regular diet may be substituted.—B. de Therap.

TREATMENT OF TYPHOID FEVER IN CHILDREN—BERGE.

Alimentation—Reduce the quantity of milk in nursing children to one-half and give boiled water or rice water. To somewhat older children, milk soup, rice water and honey, lemonade with wine. Abundant water drinking favors elimination of the toxines.

Treatment of the infection varies according to cases. In light cases in young children, twice a day a mixture of equal parts of quinine and benzo-naphthol or velol is given, in doses varying according to age. For a child of 6 years, 40 cgms. of each in 24 hours. Every two days 10 to 15 grms. of citrate magnesia. Every day an injection of boiled water is used. In severe cases Brand's treatment by cold baths is used, preceded sometimes by large doses of quinine. Benzo-naphthol, etc., is given. If the stools are very fetid calomel is given hourly in small doses. Marfan advises cold baths on the following plan:

The bath is given first at 22 de-

grees C.; then chilled to 20 degrees; next at 20 degrees and cooled to 18 degrees. Duration about 5 minutes; cold effusions to head while in the bath; then wrapping in thick blanket and a warm drink administered. The temperature is taken every three hours. If it rises above 39 degrees a bath is given. The cold bath sometimes provokes apnea, and then the child should be immediately taken out and rubbed vigorously, and if necessary rhythmic tractions on the tongue are used. To prevent the secondary infections perfect cleanliness of all the inlets and outlets of the body must be maintained and excoriations or sores must be carefully attended to.

A substitute for gutta-percha:

Tar (pitch) 1 part.
Paraffine 10 parts.
Rub together and add caoutchouc 2 parts.

Have the mixture at 120 degrees C. till it forms a homogeneous mass.

Hot baths are recommended by Auprecht and Vorvehilsky as a remedy in cerebro-spinal meningitis. They have proved successful after all the usual treatments had failed. They were used every day at about 40 degrees C. and for 10 minutes.—Rev. Med. Clin.

THE NECESSITY OF CONTINUOUS TREATMENT BY BROMIDES IN CASES OF EPILEPSY.

Fere shows that in consequence of recurrences even after a lapse of six or eight years that the duration of treatment in epileptics is almost indefinite, and that the bromide becomes a necessity to the apparently cured individual. He mentions a case in which there was a suspension of the attacks for 12 years. During ten years following the patient took bromides. Convinced that he was cured he suspended treatment for two years. At the end of this time he had frequent attacks, which did not cease till after a year's treatment with large doses. The aim of treatment should be to suspend the disease rather than to cure it by the use of the bromine compounds. Their efficacy can only be obtained by long-continued administration. This method is harmless when properly directed. Intolerance can only be determined by individual experiment. Fere considers that intestinal antiseptic is the best means of avoiding bromization.

THE USE OF THE BICYCLE.

In the Journal des Sciences Medicales de Lille for August 3, M. H. Lavrand gives a resume of a discussion in regard to the bicycle which took place at a recent meeting of the Societe de Medecine.

M. Lucas-Championniere presented the question from a hygienic point of view. The bicycle, he said, had been condemned as a means of exercise for women, and had been thoughtlessly compared to a sewing machine, to which it was not at all analogous. It had been said to cause deformity, but this accusation showed a want of reflection and a profound ignorance of anatomy and of physiology. In reality, all the muscles came into play in order to propel the machine and to keep one's equilibrium; consequently the vertebral muscles could not but increase in size and in power. The first action of the bicycle was to develop the muscles, not only those of the legs, as was commonly believed, but all the muscles of the body, and in this exercise M. Championniere thought we had the most perfect method for muscular development. Its action on the general health was also evident. The manifestations of nutrition were profoundly modified; an examination of the urine had shown this. The increase of the proportion of urea had indicated a greater waste. The influence on the heart was also very evident, and any excess in this exercise was prejudicial. One of the most valuable advantages of this form of exercise, however, was that it put the heart into a good condition of resistance. With regard to the benefit to the lungs, it might be said that the good

results were almost immediate, if care was taken to avoid the chill which was always apt to follow any prolonged exercise.

M. Marcel Brand thought that this form of exercise was the best that could be employed in the treatment of the vicious habits of adolescence, and he cited several cases in which recovery had been obtained when all other treatment had failed. The majority of affections dependent on the diminution of nutrition were favorably improved by the motion of the treadle. With regard to neuropathies, he said, the most favorable results had been obtained after a moderate use of the bicycle, and certain tabetics had derived much benefit from its use.

M. Bouloumie presented the subject from a therapeutic point of view. He stated that he had recommended the bicycle to several gouty persons, who, after using it, had not suffered so much with stiffness in the knees and in the tibio-tarsal articulations, which had become much stronger and more flexible. The general condition also had been benefited. In persons suffering with subacute nephritic colic from uric acid gravel, and presenting frequent and continual pains in the kidneys, without renal inflammation, the exercise seemed to facilitate the passage and expulsion of the calculus and to diminish the pains. In such cases the patients must be warned against excessive exercise, as any fatigue was extremely harmful. For persons affected with urinary and digestive disorders, principally liver troubles, an upright attitude in the saddle, with the body resting squarely upon the ischia, was absolutely indispensable. In this way all parts of the body would contribute to the maintenance of the equilibrium, the abdominal organs were not compressed, the action of the diaphragm was not hindered, and the circulation was not impeded at any point. This exercise, on the whole, said M. Bouloumie, was one which favored the development of the muscles and regulated the principal functions, and it could be recommended from a physiological, hygienic and therapeutic point of view, subject to these conditions: I. A good position in the saddle. 2. A proper saddle. 3. A moderate rate of speed.—N. Y. Med. Journal.

THE TREATMENT OF ICTERUS DUE TO RETENTION.

Dunjardin-Beaumetz believes in treating such cases by thorough intestinal antiseptic measures. Of the drugs used for the purpose, such as salol, benzo-naphthol, and the salicylates, he favors the salicylate of bismuth, and considers asaprol even superior to the latter remedy. A medicament that has rendered good service is calomel, acting as a purgative and antiseptic at the same time. Care should be taken, however, in administering it for a long time, lest ptyalism be produced. The author insists that bismuth, salicylate and asaprol and particularly laxatives and a hygienic alimentation, constitute the best treatment for icterus due to retention. Among the laxatives mention is made of podophyllin, cascara, and cascarine. Of mineral waters, those of Rubinat (Condal water), Carabana, and Vilacabras, in Spain, are recommended. Carlsbad salts are also spoken of as of service in the malady under consideration, being said to cause liquid stools without determining colicky pains or intestinal congestions. Diet must be mainly of a vegetable nature. When the gastric disturbance is marked, the ingestion of diastase is of advantage, and this should be given preferably after meals. Lastly Vichy and Carlsbad waters are thought to exercise a curative action, by influencing the activity of the liver and causing an amelioration of the nutrition in general.—Bull. Gener. de Therapeutique.

THE MICROBIOLOGY OF ACUTE PERITONITIS.

Courtois-Suffit, in his recent monograph on "Diseases of the Peritoneum," classe first in order among the pathogenic microbes in peritoneal in-

flammations the bacillus colicommunis (The Boston Medical and Surgical Journal). This micro-organism is a facultative anaerobic, a normal inhabitant of the intestines, but pathogenic under morbid conditions such as occur in all kinds of peritonitis of intestinal origin. Its presence has long been recognized in peritoneal exudations, while it is constantly found in septic peritonitis following intestinal wounds, perforating (gastric, typhoid, enteric, appendicular) ulcers, ischio-rectal abscess, cancer of the colon, hernia, thrombosis of the mesentreic vessels, etc. It has been affirmed that under certain circumstances, as when disordered circulation, strangulation, extreme fecal distention, undue pressure, or mechanical injury has impaired the integrity of the bowel and lowered tissue-resistance, this bacterium may become migratory, gain the peritoneum, and excite inflammation. Cornil found such bacteria actually in the substance of the wall of a partly necrosed intestine. The possibility of such migration may explain many cases of so-called idiopathic peritonitis attending stercoral impaction, severe bowel inflammations, etc.; the germs passed through the intestinal walls and provoked peritonitis. It is doubtful if peritonitis has ever followed cystitis, yet Achard and Renaut have proved the identity of the colon-bacillus with the bacterium pyogenes of the bladder. The pneumococcus has very rarely any causal relation to acute peritonitis, whether the infection occur as a sequel to pneumonia or independently of that disease. The streptococcus pyogenes has been found in the pus of a great many cases of peritonitis, where it existed to the exclusion of every other micro-organism (post-operative and puerperal peritonitis).

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DR. T. H. MANLEY, New York.

JOINT TUBERCULOSIS.

About 90 per cent. of chronic joint diseases (in America) are of tuberculous character. Of these, fully 80 per cent. can be cured by the timely use of iodoform in the joint and guaiacol internally.

Of course, in the early stages, particularly in hip-joint disease, nothing is so acceptable as the treatment by fixation. If the cases be seen early enough immobilization by plaster-of-paris, silicate of sodium, or some form of apparatus, will cure a majority of patients. Particularly is this true when guaiacol in doses of three to five minims three times daily, or a corresponding amount of the carbonate of guaiacol is given for several months.

But, unfortunately, most of these patients are not seen until too late for fixation to be of marked advantage—the tuberculous deposits have begun to break down into pus, or at least the synovial membrane is already involved so that the joint presents the characteristic symptoms of this grave disease. Even now cure can usually be secured by the internal use of the guaiacol and the intra-articular injection of a 10 per cent. solution of iodoform in pure glycerine. This emulsion must be most carefully prepared, so as not to infect the joint. If there is any question as to the cleanness of the mortar, pestle, iodoform or glycerine, the emulsion must be heated at 212 degrees for some minutes and then be kept in a wide-mouthed bottle perfectly clean. Of this, from two drachms to an ounce may be injected with an aseptic syringe, preferably the one devised by Senn. For a day or two the patient must keep quiet, just until reaction is gone, and then go on using the limb as if nothing had happened. The injection may be repeated every two or three weeks until all symptoms have disappeared.

I have cured cases of well marked tuberculosis, even "white swell-

ing" of the knee, with not more than three injections. It is perfectly wonderful how this cure follows, but it is almost absolutely sure to result if the iodoform be properly prepared and used.

Of course when sinuses have formed there is nothing to be done except to open the joint and scrape away all the diseased tissue—rarely resecting. But in children, even when large portions of the joint are curetted away, a useful joint is eventually secured.

So, upon the whole, chronic joint diseases are of not so bad a prognosis nowadays as we were taught but a few years ago to believe. All can be benefited; most cured.—Emory Lanphear, M. D., in Medical Brief.

A SUGGESTION TO PREVENT NAUSEA FROM THE USE OF ANESTHETICS.

That the mental attitude which patients entertain toward an anesthetic as they pass under its influence has everything to do with the degree of disturbance which they experience from it, has been demonstrated so many hundreds of times that it is no longer a debatable question. The force of suggestion so powerful in such cases should be utilized much more extensively than it is. Sometimes a sentiment of fear, dread or disgust is just profound enough to induce a stomach to unload its contents by way of the mouth Sometimes it is profound enough to induce violent retching even when the stomach is empty. Sometimes it is so profound that instead of causing nausea and retching it stagnates a lung into pneumonia, a kidney into nephritis, a liver into hepatitis, or a brain into meningitis. That serious consequences following a properly administered anesthetic are in most cases a product of apprehension and mental hostility to the proceeding on the part of the patient is perhaps not generally admitted to be a fact, but we believe as the profession awakes to the stupendous action of mind over matter its opinion upon a good many subjects is very liable to undergo radical changes and the ideas as to the causes of the ill effects which follow anesthetics will be found among those that will be most radically transformed Fear can pale the face, it can sweat the entire integument, it can produce incontinence of urine and feces, it can induce insanity and death. Most surgical operations, especially in private practice, are attended with an atmosphere of the most intense fear and apprehension which affects the patient, the friends, the assistants, and even the surgeon himself. This intense pall which inaugurates most operative procedures is by no means conducive to the highest type of surgical achievement. It makes the surgeon awkward, puttering, and oftentimes reckless and clumsy in his operations. It makes the assistants awkward and inefficient and occasions no end of mistakes and delays. It makes the friends obtrusive hindrances to the accomplishment of whatever is necessary, and it produces a terror-stricken condition of the patient, which bears the anesthetic poorly, wakes him with fright, worries him into septic conditions and prejudices his recovery.—Dr. E. H. Pratt, in Jour. Orificial Surgery, August, '95.

CHLOROFORM DURING SLEEP.

The following case is of interest as bearing on the question whether a sleeping person can be chloroformed without awakening.

The reporter was asked to take two teeth out for a girl aged 7, and, as she is very timid and excitable, to give her chloroform. On going to her home he found her lying on her back in bed sound asleep. Having poured about two drachms, probably more, of chloroform on a folded towel, he gradually brought it to about two or three inches from her mouth and held it there. She went on breathing quite quietly, and neither coughing nor making any unwonted movements. In a very short time she she was so well under its influence that her hand fell down when raised, and the conjunctiva was insensible to touch.

She was then lifted out of bed,

carried into another room and laid on a sofa, without her giving any sign of consciousness. On opening her mouth, however, she put up her hands and turned her head on the pillow. More chloroform was given, and almost immediately she was in a state of complete anesthesia and the teeth were extracted. She was easily aroused, but almost momentarily fell asleep again and slept for two hours. When she awoke she was much astonished to find her teeth were out.—Therapeutic Gazette.

TREATMENT OF TUBERCULOSIS OF THE JOINTS.

Professor Rydygier, of Krakow (Przeglad Lekarski, No. 15, 1895), read a paper on this subject at the Seventh Congress of Polish Physicians in Lemberg, his conclusions being as follows. 1. That conservative treatment should not be looked upon as a competitor of operative treatment; on the contrary one should be complement of the other. 2. The treatment chosen in a given case should depend on the social position of the patient, his age, general state of health, local changes, and on the joint affected. 3. If there is a distinct suppuration of the joint, with inclinaton to spread and destroy the joint, it is necessary to operate. 4. The better the method of conservative treatment the more we can limit the operation. 5. The best method of conservative treatment is that which permits the patient to profit by fresh air and movement such as will not expose the joint to irritation. 6. The best method of conservative treatment is that which best permits of the removal of the morbidly degenerated parts without any special regard to later action of the joint; in some case, however, the complete removal of the joint is advisable. 7. Operations performed too late increase the statistics of conservative treatment, but are not advantageous to the patients, while too early operations only injure unnecessarily. 8. In addition to local treatment, sea air and suitable baths are recommended as general treatment. Medical and Surgical Reporter.

TOTAL EXTIRPATION OF THE RECTUM.

Vanderlinden and de Buck (La Flandre Med., March 7) claim that partial resection, or even total extirpation, of the rectum for cancer is abundantly justified where at all practical from the point of view both of its immediate and ultimate results. They record two successful cases of this kind. Case 1.—A multipara, aged 31, in August, 1892, gave a history of a year and ahalf of pain in the lower belly, constipation, difficult defecation, grooved feces. For a year glairy mucus, blood, and yellowish fetid sanious liquid had been passed with the feces; marked loss of appetite and body weight. Per anum a growth was felt, ulcerated in places, extending 7 ctm. from below, and invading the whole circumference of the rectum, with its greatest thickness posteriorly. The summit of the growth was easily reached, and the whole tumor could be moved downward. The operation was performed on October 30, 1892. The dorsal position was used, with the pelvis raised, and thighs strongly flexed on the abdomen The anus was surrounded by two short incisions, which joined in front and behind. A posterior median incison was prolonged from these to the coccyx. The anal canal and rectum were dissected out as far as 3 ctm. above the growth, where section of the bowel was made. Suture of the bowel walls to the skin wound completed the operation, which lasted an hour. The patient returned home at the end of four weeks, and three months after had gained 10 kilos. in weight, and could already retain firm stools. There has been no recurrence up to the present time. The growth proved microscopically to be a lobulated epithelioma. Case 2.—C. D——, aged 52 married; no children. Three years' history, commencing from the climacteric, and in its details very similar to Case 1. Two indurated ulcerated masses were found in the anal region. The rectum was invaded in its whole girth by a soft, yielding, easily bleeding tumor, whose summit reached with difficulty

10 to 11 ctm. above the anus. Operation Feburary 24, 1895. Left lateral position, thighs strongly flexed and pelvis raised. The incision ran from two fingers' breadth below the posterior superior ilias spine along the groove between the glutens maximus and sacrum toward the median line as far as the summit of the coccyx, then surrounding the anus. The masculature of the buttock was detached, the insertions of the great and small sacro-sciatic ligaments cut, and the coccyx extirpated. A part of the left side of the sacrum was removed, the abundant bleeding controlled, and the rectum isolated, commencing with the anal aperture. The peritoneum was opened and isolation of the anterior rectal wall. The bowel was cut transversely 2 ctm. above the growth, and its end, slightly twisted on its axis, was sutured to the borders of the skin wound. The operation lasted an hour and three-quarters, much blood being lost. A large quantity of NaCl solution was therefore injected, and, except for two days' fever, the patient did well, and at the date of report was convalescent.—British Medical Journal.

THE SIGMOID.

Bladder, prostate, uterus and ovaries sympathetically share in the miseries due to a diseased sigmoid. Women complain of uterine and ovarian pains, lumbago, associated with a somewhat persistent insomnia, and usually are subjected to the annoyance of irregular menstruation. In both sexes the sphincter vesice is unduly exercised and the bladder only tolerates small quantities of urine, which makes night rising to empty that viscus a necessity. Lesions in the hemorrhoidal inch, or lesions in the sigmoid, often produce atony of both colon and rectum. Owing to this atonic condition the sigmoid sometimes assumes enormous proportions, and the ampullar portion of the rectum does likewise. Under such conditions, the constant tendency manifestly is to accumulations of fecal masses that stretch and attenuate the walls of the gut. These are the cases that often go on unrelieved until a solution of the continuity of the alimentary wall takes place and a fistula or ischio-rectal abscess forms. Waste of sympathetic nerve force here prevents the maintenance of that adequate tonicity in the circular fibres of the gut which governs the dimensions of its lumen.

Through this same influence of wasted ganglionic nerve force do I account for atheromatous degenerations of the blood vessels of the brain, and the distension which often goes on to the point of rupture, and the creation of that condition known as cerebral hemorrhage. I have given this matter no little thought and am growing firmer and firmer in my conviction that it is correct.

Fecal accumulations may be a cause of atony of the colon or a sequel. My opinion, however, is that deficiency of nerve stimuli is the great prevailing influence that puts an estopper on intestinal peristalsis and that accumulations naturally follow; hence, it seems to me we find fecal accumulations infinitely more often the effect of atony than its cause.

These cases become so bad from wasted nervous energy, extending over a series of years, that there is absolutely no expulsive power left, and feces have to be mined out with the fingers. Inflammation of the sigmoid section of the colon is usually associated with chronic proctitis, so that the patient is subjected to the double miseries these diseased localities inflict. By employing a rectal speculum or one of the sigmoid pattern, aided by natural or artificial light, chronic proctitis reveals the ampulla of the rectum as a flabby pouch, with the mucous membrane showing itself in the throes of inflammation, with here and there samples of tenacious mucus frequently tinged with blood. Some of this comes from the mucous membrane above the sphincter of O'Beirne, and some from the ampullar surface of the rectal mucous membrane.

The visible product of chronic inflammation of the colon and rectum

is shown in an organized mucus, sparingly or generously secreted according to the status of the case. I saw a specimen a few months ago, furnished to me by a lady from the southern portion of the city, and it completely filled a half-pint whiskey flask. It was all passed at one stool; although more yellow, it resembles in consistency and formation diminutive oysters. Again, it will come away in long stringy sections. Vigorous laxatives cause the large intestines to relieve themselves of great quantities of this chronic inflammatory exudate. After a copious discharge of mucus there is usually some pain or discomfort in certain places along the course of the colon, doubtless due to the uncovering of nerve filaments. These lesions keep on manufacturing mucus, and with it are generated gases, ferments, ptomaines and pernicious alkaloids. As the mucous membrane of the large intestine speedily takes up nutritive commodities thrown into it by rectal feeding, so will it take up and distribute throughout the blood and lymph channels these lethal products thrown off from the face of intestinal lesions. As the farinaceous foods are trying to intestinal digestion, they should be eschewed in these cases.

To examine the sigmoid to any considerable extent above the sphincter of O'Beirne, a fenestrated explorer must be employed By introducing it, armed with such a sized pledget of absorbent cotton as will snugly fit the fenestrum, it can be introduced and withdrawn, reintroduced and withdrawn, penetrating a little further each time until the exact location where pain is induced and where morbid secretions come from can be accurately determined. In this way, by changing the cotton which arms the explorer, using a greater or less quantity according to the necessities of the case, can the calibre of the gut be determined. This is not an unimportant point, as we often wish to know, before passing a rubber bougie or giving local treatment, how large the dimension of the canal is.—By T. Eldridge, M. D., in Jour. Or. Surgery.

PHLEGMASIA DOLENS.

The next paper read was by Dr. Campbell, of Seaforth, Ont. It consisted of a report of two cases of phlegmasia dolens occuring in his practice, one a few years ago and the other recently, with the treatment of the same. Both had a fatal termination, but from different causes. In first case the woman had varicose veins of the leg in a pronounced degree, which laid her up two weeks before labor. After confinement multiple abscesses formed along the course of the femoral vein, developing a well-marked case of peri-venous cellulitis, resulting in blood-poisoning and death from exhaustion on the ninth day from confinement. The second case was also in a woman who had borne several children. The woman was delivered of twins after an easy labor. She lost a good deal of blood, and the doctor had to remain two hours with her after delivery. On the fifth day she took a severe chill, which was followed by high fever and rapid pulse The milk was secreted abundantly. The lochia were not suppressed. There were no signs of inflammation or puerperal fever. The usual treatment was pursued, but the temperature ranged from 101 to 102 1-2 degrees. On the evening of the ninth day after delivery patient complained of pains in the calf of the left leg, and a well-marked case of phlegmasia dolens developed, and it bid fair to run a mild course On the sixteenth day after delivery another physician saw her and pronounced her to all appearance out of danger She thought herself she might get up, and it was to decide this point the consultation was called

On the evening of the same day she was taken with pain in the calf of the other leg, which the friends, contrary to the doctor's warning, rubbed. They turned her over on the side; they even made her sit up. Her face turned purple; she gasped a few times, and died. Death took place from embolism in the pulmonary artery. The following were the doctor's concluding remarks in both cases:

1. The swelling in both legs began at periphery. The first lost power of the limb, the second did not.

2. Both veins and lymphatics were involved in both cases, the veins being inflamed, the lymphatics obstructed.

3. The phlebitis was produced by the precipitation of the fibrine by the action of a septic agent, which had been either devoloped in the blood or had made its way into that fluid.

4. The predisposing cause in the first case, besides the hypnotic state of the blood in all pregnant women, was the varicose veins.

5. In the second case, besides the condition of the blood and a moderate varicose condition of the veins, the doctor believed that the loss of blood at the confinement was the great cause of the trouble, weakening an overstrained nervous system.

6. The modes of death were different, the first dying from pyemia, the second from thrombosis, producing asphyxia from arrest of circulation in the lungs.

7. The pathology of this interesting disease was still somewhat obscure, and much has yet to be found in reference to it.

DISCUSSION ON DELAYED UNION IN FRACTURES

BY GEORGE A. PETERS, M. B., F. R. C. S., ENG.

In assigning as the subject of the "Discussion in Surgery" the question of "Delayed Union in Fractures," your Committee on Papers had in view the fact that while rapid and brilliant advances have recently been made in the more attractive fields of abdominal, pelvic, and brain surgery, our knowledge of the repair of injuries in bones, and the best methods of treatment to bring about such repair in a rapid manner and with a satisfactory result, is little in advance of the times of Pott, Liston and Syme. It can scarcely be that we have reached the ultimate degree of perfection in the treatment of these cases, because we occasionally—though, fortunately, not frequently—see results following fractures which are not satisfactory, either as regards the appearance of the limb, or as regards its utility, and in a few cases we may fail to get any union of the injured bones whatever. The latter result, viz, non-union, does not occur, according to Hamilton, Liston, Malgaigne, Norris and other authorties more than once in five hundred cases. Dennis claims to have seen 10,000 cases in which not one case of non-union ultimately occurred, though several required operation. But cases of the condition now under discussion, viz., delayed union, are much more common. We apply the term "delayed union," then, to those cases in which the fragments of the bone remain unattached to one another several weeks beyond the time usually requisite to bring about perfect restoration of the continuity of the broken bone. Very often without any extraordinay treatment union ultimately takes place in these cases, and they are thus rescued from classification in the deplorable list of ununited fractures; but such a narrow limit marks the boundary between the two classes that, in consideration of the one, we find ourselves necessarily overlapping the domain of the other.

In regard to the nature of the wound nothing perhaps is in itself so conducive to non-union as actual loss of bone substance, as in some gunshot wounds. Apart from this, the chief reason why compound fractures are more unfavorable than simple is that incidentally germs of suppuration will, in all probability, be carried into the wound and set up their baneful action. If it were possible in such cases to prevent suppuration, the mere fact of a wound of the skin communicating with the fracture would not, to any appreciable extent, delay union of the bones.

While it would be presumption on my part to attempt to give a systematic account of the treatment of fractures to this audience, and would be entirely out of place in this paper, yet I find it incumbent upon me to express some opinion upon the setting and general conduct of such cases

as from their nature or character are liable to become instances of delayed union.

In passing, I may interject the opinion that when the local conditions are such as to excite the apprehensions of the surgeon as to the ultimate result, he should, where possible, secure his own safety in case of litigation by consultation with a fellow practitioner as to the line of treatment to be adopted, as well as in reference to the prognosis given to the patient Another advantage of having skilled aid is that an anesthetic may then be given, if found necsary. And here I beg to enter a plea for the more general use of anesthesia in the setting of all, except the simplest, cases of fracture. In compound fractures, in fractures where there is great entanglement of the fragments in the soft parts, and where spasmodic muscular contractions are present, the surgeon is greatly hampered in making a diagnosis of the character of the fracture and in bringing the parts into correct apposition by the cries and expostulations of the agonized patient. Under such trying circumstances, the surgeon is too apt to content himself with an unsatisfying examination and an imperfect reduction, in the ill-founded hope that extension, or the restraining action of the splints, or the moulding power of the muscles will bring the parts into good apposition when the spasm has passed off.

Under anesthesia, however, the surgeon can usually satisfy himself as to the character and direction of the fracture; he can tell whether the fragments are or are not in correct relation to one another; and he feels no hesitation in putting the limb below the seat of the fracture through those very extensive movements which are sometimes necessary to disentangle the lower fragment from the muscles or fascia, or, what is still more difficult, to draw the soft parts off the sharp point of the upper fragment, which sometimes pierces muscles, fascia and even skin.—Canadian Practitioner, July, '95.

Note.—The author of above excellent essay must have misquoted Dennis, or else this author did not include intra-capsular fractures of the femur, which seldom or never unite. There are, moreover, not a few fractures, the so-called cushioned-joint and ligamentous connection following, which, though "united," are not ossified, and hence, cannot properly be regarded, as repaired, in its fullest sense.

T. H. M.

Gynecology and Obstetrics.

ARTIFICIAL ABORTION.

Garrigues (Amer. Gynec. and Obstet. Journ., June, 1895) believes that the conditions which justify artificial abortion apart from acute diseases are especially serious pulmonary tuberculosis, severe valvular heart disease, aortic aneurism, carcinoma not amenable to radical treatment, chronic nephritis, severe affections of the nerve centres, and present or threatened insanity. Abortion offers two dangers—hemorrhage and septicemia. The evacuation of the uterus should be conducted, under anesthetics, with every precaution. The cervix is dilated by means of conical hard rubber and expanding steel dilators until there is room enough at least for a curette, but if possible for a finger besides. The spongy endometrium should be removed thoroughly, as well as the fetus and membranes. Garrigues scrapes as long as anything comes out. Before scraping the uterus is washed out with creolin, and afterwards a quart of a 1 per cent. solution of that drug is passed through the uterus by irrigation. Drainage is not needed during the first two months; the vagina need simply be plugged for a day. Later the uterus should be packed with iodoform gauze, gradually withdrawn daily so as to give the uterus a chance of contracting well before the last of the packing is removed from four to six days after the operation. After the end of the fourth month the measures used for induction of premature

labor are indicated, especially dilatation of the cervix, introduction of a bougie, and packing of the cervical canal with iodoform gauze. No artificial abortion should be performed without a consultation report, signed by the consultants and kept by the operator.

TREATMENT OF SOFT SORES IN FEMALES.

Von Herff (Monats. f. Geburts. u. Gynak., June, 1895) has found that the treatment of soft chancre involves certain difficulties in women, especially if the disease be treated as in males, the patients taking no rest. Iodoform is so disagreeable that the patients often neglect to apply it according to prescription. Even when it or any similar therapeutic powder is dusted on the chancre, urine lodging between the labia after micturition and, above all, free vaginal discharges rapidly decompose the chemical agent, neutralizing all the good which it can do and increasing any offensive property which it may possess. The best treatment is immediate cauterization with phenol. The genitals must be well cleansed with sublimate first. The "sore" will then appear to be made up of numerous minute ulcers, but some separate ulcers are often to be found far off. Hence, the search for the full extent of the disease must be conducted in a good light. Then each ulcer is touched with a concentrated solution of phenol (acid carbol. liquefact., P. G., almost the same as B. P.; see Squire's Companion, fifteenth edition). A small, thin piece of wood, made rough at the end, is the best instrument for the purpose. The edges of each sore must be well touched up. Dry wadding is placed over the eschars. Hip-baths and weak antiseptic injections and lotions are then prescribed. About five days after the first application the parts must be examined. As a rule the sores will be found healing. Of course any ulcer still active must be touched with the carbolic solution. If not too late, this treatment prevents the suppuration of inguinal glands without requiring enforced rest.

Miscellany.

THE INFLUENCE OF FEVER AND LEUCOCYTOSIS UPON THE COURSE OF INFECTIVE DISEASES.

Loewy and Richter (Duet. med. Woch., 1895, No. 15) investigated the effect of an increase of temperature produced in animals by puncture of the brain (Sachs-Aronshon's method) upon the course of chicken-cholera, pneumonia, and diphtheria. The animals' temperatures were in this way raised for several days up to or even above 42 degrees C. They found that the animals under these circumstances withstood two or three times the usually fatal dose of the various bacteria mentioned, but that with 100 times the fatal dose the warmed animals died sooner than their controls. The best results were obtained with the pneumococcus, which can be definitely attenuated outside the animal body by growing at 42 degrees C. For the investigation of the effect of leucocytosis pilocarpin was first of all used, but later, on account of the disturbing poisonous effects of this drug, spermin was used. Intravenous injection prevented the fatal effect of three to four times the usually fatal dose of pneumococcus when the micro-organism was injected later than the spermin, but cure did not occur if the spermin was injected twenty-four hours after the pneumococcus; death was under these circumstances only postponed. The authors conclude that the organism has in leucocytosis and in fever protective mechanisms against infection.

URIC ACID AND ITS SOLVENTS.

Mendelsohn (Deut. med. Woch., May 2, 1895) discusses the solubility of uric acid in gouty deposits and in concretions. The solubility depends on (1) the amount to be dissolved, (2) the reaction of the medium, (3) the presence of other bodies. This last point has hitherto received but little attention. Non-poisonous bodies capable of dissolving uric acid in the

retort are also expected to dissolve it in the body, whether in the case of the blood or of the urine. The author has shown that even in the reagent glass these bodies lose their solvent action when urine is present. Uricedin does not dissolve uric acid, and yet it gives to urine uric acid dissolving properities. Lysidin is an extraordinary solvent for uric acid, but it loses these properties if urine is present. Thus bodies exist in the urine which by their presence alone annul the dissolving powers of lysidin, etc. It would appear that the extensive use of these agents is not only useless but may even be harmful. The author has searched for the bodies which hinder this solvent action. Neither the urinary pigment nor urea has any such action. The earthy phosphates were precipitated and filtered off. The clear fluid was then evaporated to dryness, and the residue ignited. Then it was found that the residue when dissolved had the same hindering action on the solvent powers of lysidin, etc., as the urine itself. The most important among these bodies in the residue is sodic chloride. A few granules of common salt exercise a similar hindering action. Lysidin and piperazin when not chemically pure have far less solvent action on uric acid, and impure uric acid is also much less easily dissolved. If lysidin or piperazin be added to blood serum, the resulting fluid dissolves uric acid nearly as an aqueous solution of these agents. If saline solution or even a granule of common salt is added, the solvent action is lost. In the blood the salts amount to only 0.85 per cent., whereas 16 to 17 g. of sodic chloride is excreted daily. Hence the difference between blood and urine. Thus uric acid is dissolved in the urine in a complicated and as yet ill-understood fashion. Certain mineral waters have the power of dissolving out uric acid within the urinary apparatus or in the urne, but the mode of action is not understood. The important point is not to study the properties of uric acid apart from its surroundings; the characters of the media in which the uric acid is dissolved must be investigated.

THE TREATMENT OF COMA.

FOR COMA FOLLOWING AFFECTIONS OF THE MENINGES AND BRAIN.

1. Place patient in a well-aired room.

2. Friction the entire body with alcohol and water.

3. Apply sinapisms to the legs.

4. Apply four leeches to the mastoid region, or bleed from the arms.

5. Give the following purgative enema:

R. Sodii sulphat .....oz. i..
Sennæ fol .....oz. ss.
Aquæ ad .....oz. viii.
M.

6. Practice rhythmical tractions of the tongue by the method of Laborde.

7. Feed patient with milk and bouillon, or, if deglutition is too difficult give this nutritive enema:

R. Yellow of two eggs.
Peptone (dry) .....oz. ss.
Milk .....oz. viii.

COMA OF INFECTION AND TOXICATION.

1. Give every hour a subcutaneous injection alternately of ether and caffeine:

R. Caffeinè .....gr. xlv.
Sodæ benzoat ..... dr. i.
Aquæ bull .....dr. iii.
S. Dose, m. x.

2. Every four hours give a tablespoonful of the following:

Acetate of ammonium dr. i.
Tr. musk .....m. xv.
Essence of mint ....m. iv.
Tr. jalap .....oz. ss.
Tr. gentian .q. s. ad oz. iv.

3. Provoke diuresis by large injections of cold water (a quart and a half).

4. If poisoning is indicated, give the special antidote required, and induce vomiting by the subcutoneous injection of apomorphine—gr. 1-12.

NEUROTIC COMA.

Give the following enema:

Tr. valerian.....dr. iss.
Musk .....gr. xv.
Yellow of one egg.
Water .....dr. i.

Compress the carotid arteries with the fingers. Practice the rhythmical traction of the tongue, and pass interrupted electrical currents through different parts of the body.—La Tribune Medicale.

The Times and Register.

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Original.

A CLINICAL STUDY OF THREE CASES OF SPONTANEOUS HEMOPHILIA IN BROTHERS.

BY JUDSON DALAND, M. D., AND W. DUFFIELD ROBINSON, M. D., Philadelphia.

The occurrence of three cases of hemophilia in one generation, with the tendency so marked that in two of the brothers there was a fatal termination, justifies the addition of this report to the literature on the subject:

Case I. Boy, aged 13 years, living in Pennsylvania, at an elevation of 1800 feet. He was born at full term, and there was nothing unusual or remarkable during pregnancy or delivery, nor was there unusual bleeding. For eight months he was healthy and vigorous, and the skin was exceedingly clear, transparent and pale. At that time he was taken with cholera infantum, and was ill three months. His recovery was coincident with the first frost that occurred that year, to which climatic condition his physician ascribed his recovery.

As his mother was unable to supply nourishment he was fed by the bottle. During the last two weeks of his illness there was noticed a profuse petechial eruption over the abdomen, the back, and the legs, and, to a less extent, over the arms. The eruption was described as rounded, non-elevated spots of the size of a pin-head, black in color, uninfluenced by pressure, evidently purpuric in character. There was no hemorrhage from any of the mucous membranes.

After this illness he remained well until about the age of five years, when he suffered from an attack of arthritis, affecting especially the elbows, knees and wrists, and this was accompanied by fever and acid sweats. The joints were swollen, red and painful. Relief was apparently obtained by the use of moist applications and the internal administration of salicylic acid and salicylate of sodium. From the fifth year up to the present, the thirteenth year, he has averaged one attack of arthritis every two months, and the peculiarity of these attacks, which usually followed exposure to cold or wet, was that the symptoms appeared forty-eight hours after the exposure. Recently the attacks have been less frequent and less severe. Soon fter the fifth year the arthritis was so severe that considerable ankylosis ensued, necessitating the use of crutches until the ninth year, when relief was obtained from Swedish movements and massage. At the age of eight he had an attack of measles, whooping cough and scarlatina, from which he recovered without any complications or sequels. Since the age of five he had, approximately, fifty attacks of hemorrhages from various mucous membranes, but there was no recurrence of purpura. His father has observed that prior to the hemorrhages there would be grinding of teeth or the face would become flushed, and in consequence he was frequently able to foretell an attack. Most of the hemorrhages were nasal, but on two occasions hematurie followed trauma of the renal region, and one one occasion hematamesis, from the same cause, applied to the abdomen. Later he ac-

cidentally bit his tongue, which was followed by oozing, and then free hemorrhage, which continued for seven days. To control the nasal hemorrhage many remedies were employed, but relief was only obtained when ice was applied to the nape of the neck and to the bridge of the nose, after large quantities of blood had been lost, and when the physician in attendance thought death was imminent. For the injury to the tongue Monsell's solution was first used, which caused a cessation of the bleeding for a short time; but soon the coagulum was loosened by the oozing of blood and saliva, so that the hemorrhage was more vio lent than at the first, owing to the destruction of the tissue produced by the remedy.

Effort to check the hemorrhage from the use of intense cold produced by an ether spray proved valueless, as the spray could not be continued for a sufficient length of time, owing to the danger of ether narcocis and the repeated attacks of vomiting excited by the anesthetic.

Compression by means of forceps was attempted, but, owing to the site of the injury, which was on the side of the tongue, about two inches from the tip, it was extremely difficult to properly apply the forceps for any length of time without exciting gagging and vomiting.

Ice was applied for five minutes, until the wound was partially frozen; then it was removed for a similar time, and subsequently reapplied. This was continued for twelve hours, after which the hemorrrage ceased. At that time he showed all the evidence of extreme anemia and death was imminent. Fluid extract of ergot was given in thirty-drop doses every three hours.

After each of the hemorrhagic attacks there was nausea and vomiting. When the finger was cut it bled continuously for hours, and was only relieved when Monsell's powder was applied. His father distinctly recalls a number of occasions when this boy received a slight blow on some part of the body, so slight as not to produce even a bruise in a normal individual, which was followed by great pain, swelling, fever and discoloration of the skin, showing that a considerable extrasation of blood had occurred. The greatest swelling was observed forty-eight hours after the reception of an injury, at which time the pain disappeared. The slow development of this swelling and the discoloration of the skin would seem to prove that the more deeply-seated blood vessels were ruptured, from which oozing took place. The slight traumatism was able to produce this result, owing to the extreme vulnerability of the walls of the blood vessels.

The patient has been always intensely nervous and sensitive,and frequently, after suffering from an attack of so-called articular rheumatism, he complained bitterly of pain in the joints from the vibration produced by anyone walking about the room, even though his parents were unable to detect any movement of the bed which he occupied.

A week ago, while visiting Philadelphia to receive massage for partially ankylosed joints, he was observed to be extremely nervous, with choreiform twitching of the muscles of the face. That night there was grinding of the teeth, and the left edge of the tongue was bitten about half an inch from the tip, produced during sleep by the grinding of the teeth or from a slight convulsion. The following day there was a slight oozing, which continued for seventy-two hours, and increased until he lost about one ounce of blood per hour.

Many local remedies were tried, among which may be mentioned the use of powdered alum, antipyrine, Monsell's solution, and ice, but all proved valueless. Large doses of the compound syrup of the iodobromate of calcium were administered, and also ergot, oil of erigeron, and gallic acid; but these remedies were inefficient. On the sixth day of the hemorrhage I was given an opportunity of studying the case with his attending physician, Dr. W. Duffield Robinson. I found the patient to be well developed, his skin and mucous membranes were pale, the pulse frequent, feeble and regular.

The heart was slightly-dislocated toward the right, the apex beat could be felt in the sixth interspace, but occupied a somewhat larger area than normal; the first sound was weak, and the second sound sharp and accentuated. No murmur at the apex was audible, although a systemic murmur had been detected by Dr. Robinson at a previous examination. Over the aortic cartilage a sharp second sound was heard, and the pulmonic second was also sharp. Despite the high grade of anaemia present no haemic or other murmur was audible. The examination of the lungs and abdominal viscera was negative. The skin was carefully examined, but only one purpuric spot was detected, on the inner surface of the left knee-joint, occupying an area having a diameter of three-fourths of an inch. It was supposed that this was due to a slight injury, as no other subcutaneous effusion of blood occurred. The right leg was slightly shorter than the other, and the left knee-joint was considerably enlarged. The muscles of the legs were moderately atrophied. The physiognomy showed that the patient was intellectual, bright, precocious, and the skull was capacious.

As several acts of vomiting had occurred, and nausea and intense thirst were complained of, the administration of food and remedies by the mouth was suspended, and a nutritive enemata given, to which fluid extract of ergot was added. To secure relief from nervous and muscular excitement, and to insure quiet, large doses of paregoric were given per rectum, with 15 grains of trional to secure sleep. On the seventh day, from 6 A. M. till noon, the father, who had observed him continuously, reported that the amount of blood lost was trifling, and that very little had been swallowed. During this time ice had been applied every alternate five minutes. His condition showed that a considerable quantity of blood had been lost during the previous twenty-four hours. It was observed that the pulse at the wrist numbered 70, while the heart-beats were 130 per minute.

Physical examination showed that the arterial system was partially empty and the veins collapsed. It was evident that the peripheral circulation was imperfect, as not more than half of the systoles of the heart were able to produce a pulse at the wrist. This condition of the peripheral circulation, the increase in the amount of fibrin that occurs after large hemorrhage, together with the muscular and mental quiet produced by opium, were counted upon to favor the formation of a coagulum, thus checking the hemorrhage. A minimum quantity of water was allowed, despite severe thirst, so as to prevent refilling of the almost emptied vessels with the concurrent increase of blood pressure and danger of expelling a slow-forming clot. An examination of the blood showed that it was rather lighter in color than normal, liquid, and, nothwithstanding the large quantities lost, there was but little tendency to the formation of clots. This want of coagulability was and always has been a marked characteristic of each of these hemorrhages.

Microscopic examination of the blood showed an enormous number of very small microcytes, many of which were mere points. There were few microcytes and a moderate increase in the number of leucocytes. There were no parasites nor distorted red blood-cells, and crenation and rouleauxing were normal. The blood for this examination, which was obtained at the end of a protracted bleeding spell extending over a week, showed a decidedly greater tendency to clot than on any former occasion.

The Thoma-Zeiss haemocytometer showed 3,775,000, or 75.5 per cent., and Fleishl's haemometer showed 62 per cent. of haemoglobin.

The next day an examination showed well-marked evidence of quantitative and qualitative anaemia, no haemic murmurs audible, although especially searched for; the blood from the prick of the finger showed a normal tendency to clot, and the hemorrhage, which had recurred, instantly ceased when Dr. Robinson made a local application of a 4 per cent. solution of cocaine. The stomach was more retentive, and

there were evidences of beginning convalescence.

The condition of the blood grad ually improved , and an examination made two weeks later gave the following results: The blood emerged from the puncture freely, much more so than from a healthy individual. It was of a good color and coagulated slowly. Microscopically the blood presented a normal appearance, with the exception that there were rather more large red corpuscles than are ordinarily seen. The microcytes had entirely disappeared. The color of the red cells was somewhat paler than normal. The Fleishl hemometer showed 70 per cent. of hemoglobin and the hematokrit showed 84 per cent. of red cells. There was no leucocytosis.

At this time the finger was accidentally cut, and hemorrhage continued for thirty minutes, despite the application of ice. When a 4 per cent. solution of cocaine was employed the bleeding was checked immediately, and did not recur.

Family history: The first child was born prematurely and died shortly after birth. The second child was a boy, who was perfectly well up to sixteen months old, at which time he began to bleed from the nose, and developed hydrocephalus at the age of three and a half years. The attacks of epistaxis from which he suffered were frequent, severe and uncontrollable. He would almost bleed to death, and then gradually recover. There were no other mucous membrane hemorrhages, and at no time was there purpura. This child finally died of hemorrhage from the nose. The third child was a boy, who was perfectly healthy until the age of two years, when he died within forty-eight hours from malignant scarlet fever. At no time was there any tendency to hemorrhages nor evidence of hemophilia. The fourth child was a boy, who died of hemorrhage from the mouth at the age of eighteen months. He was anemic, poorly developed, and an eruption was observed upon the skin. The first hemorrhage occurred when he began cutting teeth, and the quantity of blood lost was considerable. Later, when the molars were erupted, a fatal hemorrhage occurred, despite the use of every known means for its relief. The fifth child was a girl, who died at the age of three months without showing evidence of hemophilia.

The mother of these children is one of a family of ten, all of whom were healthy. She has never shown any tendency to hemorrhages, with the exception that after the extraction of a tooth she observed that the amount of hemorrhage was greater than normal. This fact was well recognized by the dentist who would extract one tooth, but declined to remove a number at one time. The father has never shown any hemophilic tendency, denies syphilis, and has always enjoyed good health. The maternal grandfather is said to have been "scrofulous," and had enlarged cervical glands, which might have been tubercular or syphilitic. With this exception the other members of this family, which are numerous, and may be traced to the third and fourth generations, have never known of a single case of the bleeders' disease. The father's family was also traced to the fourth generation, and the members of it were intelligent, healthy and vigorous, not a single case of hemophilia having occurred.

Remarks.—These case are particularly interesting for the following reasons:

1. That each of these cases occurred in brothers.

2. That they all showed the first tendency to hemophilia at an early age, particularly while teething. The oldest patient's trouble began with epistaxis, following an attack of cholera infantum, which may have been a gastro-intestinal purpura. The first case is also interesting from its association with arthritis, from the statement that frequently the hemorrhage would occur in forty-eight hours after an exposure, which would excite a coincident attack of arthritis and fever.

3. The fact that slight trauma would produce extensive hemor-

rhage, proving that the blood-vessel walls were remarkably fragile.

4. The extraordinary diminution of the coagulability of the blood.

5. The valuelessness of all the ordinary local remedies and agents for the relief of hemorrhage from the wound of the tongue, with the exception of the local influence of cocaine and ice and the internal administration of the fluid extract of ergot. We are disposed to attribute the greatest influence to the enormous loss of blood, by which not only was the fibrin increased, but also the peripheral circulation was slowed, so as to allow of the gradual formation of a thrombus. The use of cocaine as a local hemostatic was suggested by Dr. W. Duffield Robinson. The remarkably brilliant results obtained in the first case lead us to hope that similar good may be obtained in other cases.

6. The occurrence of marked flushing of the face as a precursor of an attack of hemorrhage.

7. The opinion of the father that the intense nervous excitement produced by these violent pains in these attacks of arthritis may be an exciting cause of epistaxis.

8. The greater frequency and violence of these hemorrhages since removal from an altitude of 1800 feet to that of 2200 feet, and the consequent deduction that hemopholics should be removed to the sea level.

9. The occurrence of repeated attacks of acute arthritis with intense pain, redness and great swelling in association with fever and sweating, which are so frequently observed in hemophalics should be removed to were erroneously diagnosed as attacks of rheumatism. The want of coagulability of the blood at the time of these acute outbreaks, their occurrence forty-eight hours after exposure to cold or damp, the frequent coincident occurrence of hemorrhage, and the absence of endocarditis, are all points in favor of the supposition that these were not attacks of rheumatic arthritis, but were haemophilic in origin, perhaps due to the effusion of blood into the joints.

10. The second case is interesting from its association with hydrocephalus and the occurrence of death from epistaxis.

11. The third case illustrates the importance of teething in producing the first manifestations of haemophia, and shows how readily death may occur from this cause.

PHENACETINE.

BY CLARANCE S. ELDRIDGE, M. D., of Philadelphia, assistant in Ophthalmological Department, Medico-Chirurgical Hospital, etc.

Among the most important of the coal tar derivatives used in my practice is phenacetine-bayer. The rapid popularity of this drug is due in a great measure to its clinical success, and to-day it stands among the foremost remedies for its antipyretic and other properties. I have found phenacetine-bayer to be a safe, reliable remedy, and with its extended use a most convenient therapeutic agent.

Phenacetine is a white, odorless and tasteless crystalline powder, soluble in 1500 parts of cold water, more soluble in hot water or glycerine, and freely soluble in alcohol.

The peculiar action exerted by it and its manner of reducing bodily temperature is not clearly understood, although there is no doubt in my mind but that it acts directly on the thermogenic centre, either diminishing heat production or increasing heat dissipation or producing both at the same time.

During the last few years I have employed phenacetine as one of the leading drugs for la grippe. In these cases, beginning as they do, with severe pain in the head, back, limbs, with an exceedingly high temperature, I have used phenacetine with the best results. I am in the habit of prescribing phenacetine, grains three, and quinine sulph., grains two, in capsule form, every three hours, and in cases where the heart was weak I added strychnine sulphate, grain one-fifth, to each capsule. I have obtained equally good results, and sometimes even better results, by administering pill phe-

nacetine and quinine compound, as prepared by Schieffelin & Co., of New York. Under this treatment the pains disappear, the temperature decreases and the patient is made comfortable in a comparatively short time. In treating la grippe in the aged, phenacetine is the drug to use, given preferably in small doses and frequently repeated. The results are marvelous, and you will rarely be disappointed. In people of advanced years where la grippe and rheumatism are associated phenacetine and salophen, two grains of each, given every three or four hours, works well.

In fevers phenacetine can be employed with safety. In typhoid fever I think that most physicians agree that the cold bath is among the safest and most effectual means of reducing fever, when practicable. My experience with it is that it is almost impracticable, except in hospital practice, and for this reason we must choose one of the antipyretic drugs in private practice to reduce bodily temperature. I have used phenacetine in a number of cases of typhoid fever, and have never seen any harm result. I never give large doses in these cases, but small and repeated doses, and have always obtained the desired results. I rarely give more than 8 grains in the afternoon; this usually controls the fever and has enough anodyne properties to secure to the patient a very restful night.

In the beginning of typhoid fever in cases where we have severe headache great relief is obtained from the use of phenacetine.

To control the pyrexia, pain and general restlessness of pneumonia, phenacetine should not be lost sight of. It prevents dyspnoea, reduces temperature and controls pain. Clinical experience must be your only guide in these cases.

Phenacetine acts promptly, and its effects are lasting. It produces diaphoresis without any depressant action upon the heart, and, therefore, can be used in these cases with perfect safety. It is best given in small and repeated doses until the effect is obtained.

In the treatment of scarlet fever and diphtheria phenacetine is the drug to use for the pyrexia, restlessness and other nervous phenomena.

In scarlet fever, if given at the onset of the attack, it will prevent convulsions and modify the high temperature that always accompanies this grave disease.

In diphtheria where the heart's action is weak and temperature high, phenacetine works wonders. Here it controls the fever without any depressant action upon the heart. I can recommend it as a safe and efficient antipyretic agent in these cases.

In hemicrania, migraine, neuralgia and all forms of cephalalgia, phenacetine is unrivaled. In these cases it acts promptly and with certainty, and is very useful in headaches of the nervous and overworked. In cephalalgia of nervous origin I prescribe Schieffelin's pill, Hemicranine, composed of phenacetine-bayer, 3 grains; caffeine, 1 grain, and citric acid, 1 grain, and I obtain from this formula most happy results. Another formula I am in the habit of using in these cases is: Phenacetine, grains 3; caffeine, grains 1; monobromated camphor, grain 1. With this formula my results in some cases have been marvelous.

In some cases of hemicrania where phenacetine has been given for the relief of pain the attacks occur less frequently, at longer intervals, and are less severe. In these cases I do not think this remedy is altogether curative. I always, if possible, find out the cause of the headaches and remove it, but depend upon phenacetine as my sheet anchor to relieve pain until such time when the disease can be eradicated from the system.

The pain so often due to eye strain is relieved like magic by phenacetine, but permanent relief cannot be expected in these cases, as this can only be obtained by the use of proper-fitting glasses.

In various forms of rheumatism I have used phenacetine, usually giving it with the salicylates, and have had splendid results in these cases. I administer this remedy in capsules,

but sometimes give the salicylates in solution and the phenacetine in powder form. In this way you can regulate the dose of each according to the severity of the case and the susceptibility of the patient.

I have also given phenacetine combined with solol, and with salicin, and the results have been very encouraging.

In cases of whooping cough phenacetine has done some good work, often modifying the spasm, and sometimes diminishing the severity and frequency of the paroxysms. I do not think phenacetine has any tendency to cure in these cases, but sometimes under its use the attack seems to run a shorter course. One or two grains should be given every three or four hours, according to the severity of the case.

In phthisis pulmonalis, phenacetine should not be lost sight of. It has been found that if given early in the afternoon it prevents the evening exacerbation of fever always accompanying this disease, and to some extent lessens the expectoration, while in some cases the cough becomes easier. Phenacetine can be given in divided doses every three or four hours, or in one large dose, according as the severity of the case might demand.

The various uses that the physician has found for phenacetine are almost legion. I have used this valuable therapeutic agent for a long time, and have found it a very useful and safe remedy. I have never encountered any bad effects from its use, and this is probably due to the fact that wherever I have occasion to employ the drug in cases of weak heart I always combine it with heart stimulants, such as strychnine, caffeine, etc. Toxic symptoms should always be looked for whenever administering large doses of this or any other like drug, although I have never seen them. The most striking symptoms would be cyanosis, more marked on the face, lips and fingertips; a sensation of exhaustion; desire for air, and vertigo. Phenacetine is easy of administration, and, being almost free from taste, can be used in powder form, placed on the back of the tongue in the case of children, where it would be almost impossible to administer medicines in liquid, pill or capsule form.

2258 North Seventeenth street.

Society Reports.

THE MEDICO-LEGAL CONGRESS.

The Medico-Legal Congress, held under the auspices of the Medico-Legal Society, of New York, met in the Federal building.

Many eminent physicians and lawyers were present, among them Forbes Winslow, M. D., the celebrated English specialist in insanity; Clark Bell, Esq., Dr. Paul Gibier, Recorder Goff, Senator Guy, Professor R. Ogden Doremus, ex-Surrogate Rastus S. Ransom, Mrs. Eliza Archer O'Connor, Mrs. M. Louise Thomas, once president of Sorosis; Mrs. Jennie Stuart Wilcox and Miss Sophia McClellan.

Rastus S. Ransom welcomed the visitors in the name of New York and Brooklyn, and ex-Judge Noah Davis, Professor Doremus, Judge Dailey, Clark Bell, Senator Guy and Dr. W. J. O'Sullivan made pleasing speeches.

Dr. Forbes Winslow read the first paper. His subject was "The Progress of Lunacy," and he spoke in a high-pitched key and without a pronounced English accent. He is tall, well built, of ruddy complexion and wears mutton-chop whiskers. He is a lawyer as well as a physician. He said that in Great Britain on January 1, 1895, there were 91,081 persons registered as of unsound mind, an increase of 2014 over the number a year before. He complimented the United States on its magnificent institutions for the insane, and said he was looking forward with pleasure to visiting them.

A paper by Albert Bach, on the "Necessity of Amendments of the Laws of New York appertaining to Commitments of the Insane," attracted much attention. Mr. Bach severely criticised the present law gov-

erning commitments of the insane, and said that no one should be committed to an asylum without a full hearing and a complete examination.

His paper was warmly discussed by Dr. J. C. Pierson, Dr. Madden, Dr. Mann, Dr. E. W. Lamoreaux and Judge Palmer, who were followed by Mr. Bach in defense of his opinions.

"Inebriety" was discussed by T. D. Crothers, Dr. Forbes Winslow, Dr. J. N. Quimby, Dr. E. C. Mann and Mrs. Mary Louise Thompson, the only woman speaker of the day.

The following officers were elected:

President, Clark Bell; vice presidents, Judge Abram H. Dailey, ex-Judge Noah L. Davis, Dr. W. J. O'Sullivan, Judge Calvin E. Pratt, Judge A. L. Palmer, Rastus S. Ransom, Charles L. Guy; medical vice presidents, T. D. Crothers, M. D.; Professor R. Ogden Doremus, Dr. Paul Gibier, Dr. W. B. Outher, Dr. Irving C. Rosse, Dr. Forbes Winslow, Mrs. H. Louise Thomas and Dr. Frank H. Caldwell, of Florida; secretaries, Moritz Ellinger, Dr. F. B. Downs, Albert Bach, Clarence A. Leighton, Professor Charles A. Doremus, of New York; treasurer, Dr. George Chaffee.

The matter of self-destruction was discussed the following day. Dr. Forbes Winslow, of London, recognized as the ablest authority upon the relation of disease to crime, read a paper in which he said that incendiarism, infanticide, kleptomania, homicide and suicide have been epidemic during this century at one time or another, the force of imitation being so great and acting prejudicially upon weak-minded persons, or on those disposed to mental disorders.

Then the doctor told how the stoics and philosphers convinced people that life was a curse and they killed themselves. Lyons once had a drowning epidemic among women for which no cause could be assigned. It was checked by a public order that the bodies of those who drowned themselves should be exposed in the market place. The ladies of Miletus were stopped in the same manner from hanging themselves.

The doctor referred to the alarming epidemic of suicide this year, giving these general reasons for it:

"The great publicity given by the press in publishing revolting details of crime and trials, thus reacting perniciously in the minds of weak-minded persons.

"Insufficient power of the Legislature in suppressing such publicity.

"The liability to act epidemically, in the same way as I have previously mentioned in past ages."

Dr. Winslow went on to explain the reciprocity of action between different mental conditions and affections of particular organs. "The passion of fear," he said, "when excited has a sensible influence upon the action of the heart, and when the disease of this organ takes place independently of any mental agitation, the passion of fear is powerfully aroused. Anger affects the liver and frequently gives rise to an attack of jaundice. Hope or the anticipation of pleasure affects the respiration."

Statistics were quoted to show influence of mental states upon the body. Poverty came first, then domestic grief, reverse of fortune, drunkenness and misconduct. The doctor went on:

"There is no passion of the mind which so readily drives a person to suicide as remorse. To live in horror the infuriated sufferer feels himself an outcast from God and man, and, although his judgment may still be correct upon other subjects, it is completely overpowered upon that of his actual distress.

"In England the great majority of the cases of insanity among women can clearly be traced to unrequited and disappointed affection."

Gustav Boehm, of this city, prepared a paper, in which he said some kind words about suicides. He declared that "a man who has the conviction that life has nothing to offer worth living for and methodically arranges his affars to avoid any misunderstanding after death, then coolly sums up by cutting his throat, ought not to be declared a fool. His is rather an act of philosophic quality—the result of deep thinking and ripe judgment—than the doings of an imbecile."

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TREATMENT OF PNEUMONIA BY DIGITALIS.

Naegeli-Akerblom (Centralbl. f. inn. Med., August 10, 1895) first refers to the results obtained by various physicans with this treatment, and especially to those of Petresco. The mortality in Petresco's 1192 cases varied from 1.2 to 2.6 per cent., but the patients were healthy young soldiers. In 475 cases treated in Massini's Poliklinik the average mortality was 11 per cent., and here the patients were mostly poorly-housed and advanced in life. In the author's 64 cases treated by digitalis 11 died. Of 40 cases under 50 years of age, not one died of pure pneumonia, the two deaths occurring in cases of phthisis complicated by pneumonia. Of the 9 remaining fatal cases, 7 were hopeless from the outset, and 2 were over 70 years of age. The object of the digitalis treatment is the regulation of the circulation through the lungs, no antipyretic effect being expected. The author would also attribute the good results to the increase of lecocytes thus produced. His investigations show that both in animals and man digitalis produces a hyperleucocytosis. The author used digitalis in large doses. He thinks it the chief therapeutic agent in the treatment of acute pneumonia. He is of opinion that hydrotherapeutic measures should, when possible, be combined with it, as in this way the leucocytes are also decreased in number.

Our experience with digitalis in pneumonia leads us to believe it should not be relied upon as a sole therapeutic measure, but that it is a valuable ally in certain stages and cases.

The third stage of pneumonia offers the best indications as to its use and occasionally, in the earlier stages, where the patient is weakly, digitalis is necessary to support heart action.

DIABETIC COMA.

Hirschfeld (Deut. med. Woch., June 27, 1895) says that the increase in the excretion of acetone is due to too little carbohydrate food. In seven cases of diabetes with acetonuria the disease ran its course rapidly, the longest duration being twenty, and the shortest twelve, months. The glycosuria was very considerable in all the cases, and the acetonuria increased as time went on. Acetone excretion above one gramme is an unfavorable sign. In other milder cases of diabetes dying of other causes than coma the acetone excretion was small. The age of five out of the seven cases above named was over 40 years. Considerable over-ex-

ertion and failure in nutrition are exciting causes. In several cases the author recognized a loss of weight during ten days before the onset of the coma. After a strict nitrogenous diet coma has been known to appear. The author believes inanition to be the most important cause of coma. The beneficial effect of over-nutrition also speaks in favor of the disadvantages of insufficient food. More importance is now attached to abundant nourishment in diabetes than was formerly the case. Occasionally coma has followed the use of anesthetics. Ether should be preferred. Perhaps the harmful effect of chloroform is due to its action on the heart and vessels. The diagnosis of coma is mostly easy. The patient may begin with gastric disturbances; headache and a feeling of dyspnea follow. Abortive forms of coma are very frequent. One or more symtoms may be marked, but they disappear. Sometimes abdominal symptoms have been very conspicuous, even intestinal obstruction being simulated. Intestinal intoxication has been advanced as a cause of coma, yet careful attention to the bowels did not ward it off. In three diabetics suffering from surgical disease a suddenly increased acetonuria preceded the gretting worse. The cases may be arranged in two groups: (1) Young persons with considerable glycosuria and marked and increasing acetonuria, in whom the course is rapid; and (2) old people with mild diabetes, who, in consequence of gangrene or severe septic disease develop coma. To prevent coma muscular exertion must be regulated. The estimation of acetone is important; the general condition of the patient and the state of the pulse and breathing after exertion should be noted. The condition of nutrition must be attended to. Over-feeding should at times be had recourse to. Small quantities of carbohydrates, not too much albumen, and abundant fat and some alcohol are recommended. With coma appearing more carbohydrates should be given. Glycerine may be tried, as it lessens the excretion of acetone. Infusion of alkalies has only a passing effect.

Book Reviews.

EXERCISE AND FOOD FOR PULMONARY INVALIDS. By Charles Denison, A. M., M. D., Col. Price, 35 cents. The Chain and Hardy Publishing Company, Denver, Col.

This work deserves the commendation of the whole profession. It is well written, positive, and to the point. The value of exercise in pulmonary consumption is unquestioned and it will aid the physician in instructng his patient as to the proper exercises to be taken in phthisis.

THE POCKET MATERIA MEDICA and Therapeutics. A resume of the action and doses of all official and non-official drugs now in common use. By Henri Leonard, A. M., M. D., professor of the medical and surgical diseases of women and clinical gynecology in the Detroit College of Medicine; member of the American Medical Association, etc., etc. Second edition, revised and enlarged; cloth, large 16 mo., 367 pages, price, post-paid $1.00. Detroit, 1895. The Illustrated Medical Journal Co., publishers.

The second edition of this popular therapetutic work has had 67 pages added to it, besides typographical errors corrected, etc. A new and complete cross-index has been prepared, which renders the quick finding of a non-familiar drug possible. This is an important feature lacking in many ready-reference books. It is a "down-to-date book," and this with unique arrangement of its description of drugs and compounds secured for the first edition an order by cablegram for 1000 copies from Bailleire, Tindall and Co., one of the largest medical publishing houses in London; a compliment rarely paid any American book. It has also been a popular book with physicians, pharmacists and students on this side of the water, judging from the early exhaustion of the first edition.

The descriptive arrangement of the drugs is as follows: Alphabeti-

cally the drug, with its pronunciation, (official or non-official standing indicated), genitive case-ending, common name, dose and metric dose. Then the English, French and German synonyms. If a plant, the part used, habitat, natural order, botanic description, with alkaloids if any; if a mineral, its chemical symbol, atomic weight, looks, taste, how found, its peculiarities. Then the action and uses of the drug or compound, its antagonists, its incompatibles, its synergists and then antidotes. Then follow its official and non-official preparations with their medium and maximum doses. Altogether it is a handy volume for physician, druggist or student, and will be frequently appealed to if in one's possession. We believe it to be the most complete and exact of any of the books of its class now issued, and its moderate price is to be commended.

THE AMERICAN ACADEMY OF RAILWAY SURGEONS. Official report of the first meeting held at Chicago. By R. Harry Reed, M. D., Columbus, O.

An official report containing the papers and business of this academy together with a membership roll.

MEDICAL AND SURGICAL REPORTS OF THE BOSTON CITY Hospital. Sixth series. Edited by Drs. G. B. Shattuck, W. T. Councilman and H. L. Burrell.

This volume contains annually a resume of some of the important medical and surgical work in this great institution. The literature is always of vast importance, from a clinical point of view, to the profession at large, as well as most scientific.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA, at its 45th annual session, held at Chambersburg.

This volume contains the report of the business of the State Society and the papers read at the last annual meeting, which are very valuable for the most part.

SEVENTEENTH ANNUAL REPORT OF THE ILLINOIS STATE BOARD OF HEALTH.

ANTIPHTHISINE. Report on Professor Klebs' new tuberculin derivative and some of the cases treated. By Charles Denison, A. M., M. D., Denver, Col. Reprinted from the Medical Record, July 20, 1895.

FAVORABLE RESULTS OF KOCH'S TUBERCULIN TREATMENT IN TUBERCULAR AFFECTIONS THAT ARE NOT PULMONARY. By Charles Denison, A. M., M. D., Denver, Col. Reprinted from the New York Medical Journal for August 3, 1895.

BRAIN RESISTANCE TO UREMIC POISON. By Dr. Brummel Jones, Kansas City, Mo. Reprinted from the Kansas City Medical Index, July, 1895.

GAUZE DRESSINGS IN SURGERY. 1895. Johnson and Johnson, New Brunswick, N. J., U. S. A.

TRIONAL: ITS RANGE OF APPLICABILITY. By Samuel Wolfe, A. M., M. D, Philadelphia. Reprinted from the Medical Bulletin.

HAEMATOBLASTS AND BLOOD PLATELETS. Dr. M. L. Holbrook, of New York. Reprinted from the proceedings of the American Microscopical Society, 1894.

THE LIVER AS AN ORGAN OF ELIMINATION OF CORPUSCULAR ELEMENTS. By Gustav Futterer, M. D. Reprinted from Medicine.

STRABISMUS AS A SYMPTOM, ITS CAUSES AND ITS PRACTICAL MANAGEMENT. By Leartus Connor, M. D., Detroit, Mich. Reprinted from the Journal of the American Medical Association, June 29, 1895.

Electro-Therapeutics.

IN CHARGE OF

DR. S. H. MONELL, New York.

REPORT OF A CASE OF WRITER'S CRAMP TREATED BY STATIC ELECTRICITY.

March 29, 1895.—Miss ——, telegrapher, aged 25 years. She has been telegraphing for five years. Her right hand has been failing for two years, and is now practically useless; the left hand is also nearly useless. She can only clumsily push the key. She keeps at work, but must soon give up if she is not relieved. She has tried various mechanical devices, and has had some medical treatment, without benefit. Her wrist is powerless, there is some distress and pain in the arm, and the thumb twists off the key. The patient is anemic and neurasthenic, but has never lost a day on account of sickness, and she considers her general health fair.

Upon careful inquiry, and finding that her right arm had failed so early in her work when it had been easy to do, I concluded that the lapse of time (two years) and the nature of her case rendered the prospect of relief discouraging. I therefore frankly informed her that I could feel no hope of doing her much good, but that I would treat her for a short time, and, if she derived any benefit, well and good, and if not, then I would cease treatment. She was somewhat disheartened, but acquiesced.

A five-minute application of static electricity was made to her right arm simply as a test of the muscular condition, but, after making her use the key (a telegrapher's instrument which I keep for the purpose), I observed an evident increase in the facility of her fingering.

March 30.—She reports that her arm felt more comfortable all night and was nearly free from the usual sense of distress. Duration of treatment to-day, 13 minutes. The arm felt better after the application. I advised very mild exercise for both arms, and placed her upon appropriate treatment for her anaemia.

April 1.—The patient, having rested for a day, her arm felt benefited, and she said that the operator at the desk next to hers had told her on Saturday that she "sent better." Duration of treatment to-day, 15 minutes.

April 2.—The patient reports that she "sent" fairly yesterday after her day's rest and treatment, but about 5 P. M. her arm got very heavy and felt poorly. Her working hours are from 10 A. M. to 6.30 P. M. The day was rainy, and on such days her arm usually felt worse.

April 3.—She reports a steady improvement. She was able to use her arm all the morning. Her wrist is regaining power. Other operators tell her they notice she "sends" a great deal better than formerly.

Increased strength of application to-day, but was careful to avoid all fatigue in treatment.

April 4.—The patient reports that she "got all through her work yesterday without a bit of trouble by using her fingers easily and slowly." It is fully two years since her arm acted so well. The general muscular condition of her arm has improved and the pains have almost ceased.

April 5.—The gain continues; a steady, small advance each day. The arm did better yesterday than it has done any day so far. In view of her two years' experience with other treatment, she states that the gain to her seems "wonderful."

April 6.—The arm felt better yesterday, although she had a hard day's work. About 5.30 P. M. the upper arm (biceps) began to feel lame. In the evening, however, it became rested and felt natural, there being no more of the former distress and aching sensations. She stated that had she not been so greatly benefited by the treatment she could not have done such a day's work, but would have had to go to the superintendent and ask to be transferred to other duties.

April 7.—She had another busy

day on Saturday, and the arm did well, but it got tired toward the close of the day. The patient timed herself on one message of 72 words, which she sent in two minutes. As her work is mostly cipher work, requiring special care in sending, she considered her speed excellent. To-day (Sunday) she is able to rest.

April 8.—Repeated treatment as usual—about 15-minute applications. Her Sunday rest was very grateful to her arm.

April 9.—The patient had a very hard day's work yesterday, equal to a good day's work for any ordinary operator in perfect health. About 4 P. M. her arm got tired and she was obliged to take her thumb off the key and use her fingers only. No pains recurred, and no distress followed at the close of the day. She became annoyed at having so much work put upon her when she needed relief in order to benefit by the treatment, but to her protest the manager replied: "Oh! you seem to be doing well enough."

April 10.—She had only a moderate amount of work yesterday, and got through it easily. She again stated her need for temporary rest, and was promised a few days' partial relief after to-day. She felt that her arm was overtaxed by the heavy work of the 9th instant, and that the thumb and fingers felt the strain. She has recovered the lost ground, however.

April 11.—The patient was transferred to other work, according to promise, except at the noon hour, when she had to take her place at the key. She felt the benefit of the rest at once, and had so natural a feeling in her arm that she "rather enjoyed the sending she did at noon."

April 12.—The patient states that her arm feels "splendid."

April 13.—Rained to-day, consequently her arm feels slightly heavy. As circumstances prevent her from continuing the treatment, she states that a careful estimate of her arm now is that it is not equal to her early and best work, but it is fully equal to its condition nearly two years ago. The thumb and the fingers stay on the key perfectly, and are as flexible as ever. The power and endurance of the whole arm are below par, although wonderfully improved.

May 8.—Upon resuming work after stopping the treatment her arm lost some of the gain, but soon ceased to lose, and was steadily doing well; the result was very satisfactory. It is now 25 days since the last treatment, and she is using her arm with a fair degree of comfort.

The points of interest about this case are that she had only 15 electrical applications; that she was obliged to pursue her vocation during the treatment until the last three days; that her gain was even and continuous, and that the wrist, which was powerless, recovered on a par with the average strength of the entire arm. The duration of the sittings was about 15 minutes, which was increased to 20 minutes toward the last.—New York Medical Journal.

CURE OF UTERINE DISEASE BY VIBRATIONS.

Bourcart (Ann. de Gynec. et d'Obstet., June, 1895) would revolutionize uterine therapeutics by extending Brandt and Kelgren's principle of using manual vibrations to insure absorption of inflammatory exudations. In the case of the uterus instruments are required. Liedbeck has already invented a good apparatus for producing vibrations by electric means. In the case of the uterus the vibrations must be rapid, very regular, and penetrating. The vibrations can be perfectly transmittted through the abdominal walls. Boucart, acting on the knowledge of these facts, has contrived a portable dynamo, to which he fits on a vibrator, which he places with his right hand against the parietes. The uterus is pushed towards the parietes by the left forefinger passed into the vagina. In the same way the Fallopian tubes and ovaries may be pressed in the direction of the vibrator. Boucart declares that subinvolution is particularly benefited by the vibration treatment. In me-

trorrhagia from fibroids it is equally useful; the tumor may even diminish in size under a course of this treatment. He treats endometritis by vibrations transmitted by means of a specially-constructed stem, but he admits that further study of this new variety of uterine therapeutics is required.

Gynecology and Obstetrics.

AN UNUSUAL AND REMOTE SEQUELA OF OVARIOTOMY.

BY WALTER FALLA, M. R. C. S., England; L. R. C. P. London.

A woman, aged 52, was admitted into the Jersey General Hospital on April 12, 1894, suffering from a large ovarian cyst. On April 17 I performed the operation of ovariotomy. The cyst was unilocular and quite free from adhesions. The pedicle being rather broad, it was transfixed and tied in the usual way with a stout silk ligature and the abdominal wound closed with a few silk sutures, which were removed on the eighth day, the wound having quite healed. The highest temperature recorded was 101.6 degrees F. on the fourth night, after which it was normal. On May 3 the patient got up for the first time, 16 days after the operation; she made an uninterrupted recovery and was discharged from the hospital quite well on May 17, a month after the operation. She continued in perfect health until the end of December last, when she said she first felt pain on micturition, but did not have any medical advice for it. In April she noticed a little blood in the urine. These symptoms, the patient said, continued and gradually became worse until she consulted me on June 30 last. She then had all the symptoms of stone in the bladder, but would not submit to an examination. On July 19 she again consulted me as she was in great pain, and the following day I sounded the bladder and found a calculus approximately one and a half inches long and three-quarters of an inch broad. On July 26, with the assistance of Mr. Bentlif and Mr. Sullivan, I performed the operation of lithotrity. The calculus was phosphatic, and was easily crushed. On attempting to withdraw the lithotrite I found it impossible to do so without using undue force, but after some further crushing and manipulation I was able with more or less difficulty to withdraw the instrument, when between the blades I was astonished to find a thick silk ligature covered with a certain amount of phosphatic deposit, which easily accounted for the difficulty I had just experienced. The bladder was afterwards washed out in the usual way, and all the fragments removed. The patient had no bad symptoms, and in a few days was practically well. On examining the ligature carefully I found that it was undoubtedly that which had been used for tying the pedicle of the ovarian cyst.

Remarks.—It seems difficult to understand how a ligature used in tying the pedicle of an ovarian cyst could ultimately become the nucleus of a vesical calculus in a case in which there was no injury to the bladder during the operation and no difficulties whatever connected with it, the patient continuing in perfect health for about nine months afterward. It is also remarkable how the ligature, which must have set up a certain amount of irritation, and which eventually perforated the bladder, could do so without giving rise to any symptoms until it became lodged in that viscus.—Lancet.

TREATMENT OF RETAINED PRODUCTS OF CONCEPTION WITH HEMORRHAGE IN CASES OF MISCARRIAGE.

BY SEPTIMUS SUNDERLAND, M. D., ENGLAND.

(1) To attempt, first of all, to remove the retained products by "bimanual and digital manipulation," the left hand pressing down uterus from abdomen, the right forefinger

being passed into the uterus. (2) If this is impossible, then to pass the whole hand into the vagina (the patient being perfectly under ether), and proceed as in (1). (3) If this is impossible, then to seize the anterior lip of the uterus firmly with a vulsellum, to pull it down to the vulva—or as far as it will come without using undue traction—the instrument being held by an assistant, and to proceed as in (1). (4) Then, if still impossible, to remove an adherent portion of growth, to resort to the use of the curette, but even then, to assist removal by the use of the finger, and to feel with the finger that everything has come away after the curetting is completed.

In some cases, where the placenta has been very adherent, I have used a small finger curette, similtar to the one used by throat specialists, fitting the finger-nail, which I have fastened around my wrist with silk; any projections or irregularities on the intrauterine surface can then be felt with the finger-tip, and can be immediately scraped away by the artificial finger-nail.—Med. Times.

VAGINAL TAMPONS.

A French contemporary recently advocated the treatment of inflammatory conditions of the pelvis in women by firm plugging of the vagina. The treatment recommended consists of introducing through a large speculum, and packing very firmly against the vaginal vault, wool plugs soaked in glycerine, and each being about the size of a walnut. The theory is that, by this means, prolapsed and tender structures are supported and congestion is relieved by the dialysis set up by the glycerine. The plugs are left in place for several days and the patient can walk about, it is said, and attend to her ordinary duties. The lower part of the vagina, however, according to our contemporary, must not be plugged, or dysuria or retention may occur. We have rarely read of a more unpractical remedy. In the first place it is dangerous, and in the second place it would almost certainly fail in its expected object. In patients suffering from inflammatory diseases of the tubes, in which, for example, a collection of pus in one or other Fallopian canal was bound down and fixed by inflammatory adhesions, such pressure on the vaginal vault as above proposed might easily cause rupture of the tubes, sudden acute peritonitis and a fatal termination, which would probably, and with considerable justice, be ascribed to the recent manipulations of the practitioner. Then it is needless to point out that the diagnosis in some cases such as these is very difficult, and the treatment might be adopted without the gravity of some tubal affection being recognized. And then the inefficiency of plugs packed up against the vaginal vault should be manifest to anyone with practical experience of such treatment. They would have no base of support, if the vagina is not to be packed throughout, and within five minutes after the patient had risen to her feet, the vaginal vault would of course be left lax and unsupported, owing to the falling of the plugs towards the outlet.—Med. Times.

Medicine.

IN CHARGE OF

DR. E. W. BING, Chester, Pa.

MARSDEN'S PASTE FOR CANCER.

The formula for Marsden's paste is as follows:

R. Acid arsenious.....dr. ij.
Gum Arabic.....dr. j.
Cocaine muriate..gr. xviii.

This powder should be made into a paste by adding water when it is to be used; and "the paste should be of the consistency of rich cream, and applied to the wound on a small piece of cloth, and left on from eighteen to thirty-six hours. This can be repeated as often as necessary." The above is the formula for the stronger paste. In the weaker, only one drachm of arsenious acid is used, and twelve gains of cocaine.—Med. Times.

DEATH IN ACUTE PNEUMONIA.

Bollinger (Munch. med. Woch., August 6, 1895) mentions that death in acute pneumonia is usually attributed to (1) inefficiency of the lungs owing to extensive consolidation; (2) severity of the infection, as in septic forms of pneumona; (3) complications, such as meningitis, pericarditis, etc.; (4) heart failure, which may be due to inherent weakness in the heart, or be brought about by the pneumonic infection. Individual resistence is also an important factor. The author draws attention to two facts noted afer death from acute pneumonia: (1) the general anemia of all organs, and (2) the absence of so-called collateral hyperemia in parts of the lungs unaffected by the pneumatic process. The author would attribute this to the extensive exudation, which robs the blood of its most important elements. The results of this exudation are practically similar to those produced by the recurrent internal hemorrhage noted in some of the infections. The leucocytosis seen in acute pneumonia is a regenerative process to compensate for the loss to the blood occasioned by the exudation. Thus the author thinks that the critical collapse manifestations in croupous pneumonia, and the fatal cardiac insufficiency are due to the oligemia which leads to an inadequate nutrition of the cardiac muscle. Finally, he draws attention to the harm done by blood letting. Fluid should be administered by all possible methods; perhaps even the infusion of saline solution should be adopted to compensate for the oligemia.

THE BENEFICENT MICROBE.

In his presidential address before the British Medical Association, Dr. Russell Reynolds calls attention to the "gradually increasing appreciation of thefact" that the lower forms of life that we include under the general head of microbes, and to which it is the popular fashion nowadays to refer all manner of disease, are not altogether mischievous in the influences they exert on the human economy, but are, on the contrary, often beneficial. Though this is no new medical view, its statement under such circumstances by so high an authority at this time has a certain significance. It is a recognition of a truth that is becoming more and more evident, that we only know as yet a small part of the beneficient functions of these bodies, and that their uses to mankind. Dr. Reynolds even the maleficent ones may have goes at some length into the subject of immunization as indicating this utilty and alludes to the long-known facts that bacetria are useful and probably essential in many of the healthy processes taking place in the human body. It has been taken for granted as a fact in physiology tht they have their part in digestion, and it seems to be established that they are under certain conditions essential in the life of some higher vegetable types, and in other instances, as in the case of the normal vaginal bacillus, they seem to exercise a directly protective influence. These facts are known to medical men, but in these days of popular "microbe killers," and with the general tendency of the public to absorb a little medical knowledge to its own hurt, a little reiteration and consideration of them may not be altogether a bad thing.

Even the pathogenic bacteria may have their uses in causing a constant and general immunizing process in human populations. Probably, with less frequency of these occurrences and a less general distribution they would be far more virulent when they did attack the system—the fatality of measles and other comparatively harmelss infections of civilization among savages, the extra virulence of new epidemics and the occasionally observed proportional mildness of the some disease after it has become common, quite apart from the selective process that might be assumed were the disorders always self-protective or fatal, all point in this direction. While, therefore, there are many of these organisms which mankind could well dispense with, were that possible in any absolute sense, it may be that we are gradually getting better off as re-

gards their influence by their very frequency. Pathologic familiarity may breed a physiologic contempt.

These are only suggestions, and may not be necessarily accepted, but they are permissible ones in the present state of our knowledge, which is still largely in the suggestive phase. —Ed. in Journal of A. M. A.

Paresis coming on from syhpilis and associated with excessive use of spirits is not uncommon, and is often masked and not recognized. Cases of inebriety are often paretic with a syphilitic origin, and require very active medication, and even then are incurable. Traumatism is often associated and requires careful diagnosis to eliminate.—Quarterly Journal of Inebriety.

INEBRIETY AMONG CHILDREN.

Drunkenness exists among childen, and is more frequent than people imagine.

It is observed amongst them in nearly all the forms in which it is found among adults.

In the majority of cases it manifests itself among the predisposed, the hereditary, the degenerate.

The prospect is most serious on account of heredity and the uncertainty of treatment.

The treatment ought to be principally, and above all, preventive, not neglecting, however, the treatment of symptoms and complications.—De Tour's Quarterly Journal of Inebriety.

HYPNOTIC SUGGESTION FOR ALCOHOLISM.

Bushnell (Med. News) reports twenty-three cases in which hypnosis and hypnotic suggestion was the line of treatment resorted to for alcoholism. In no case did he fail to hypnotize the patient. Eighteen were hypnotized on the first attempt, one on the second, one of the third and one on the fifth.

The method was usually that of requiring the patient to fix his gaze on an object while the operator stood behind him and stroked the forehead evenly with both hands. Generally the patient's eyes close spontaneously in from two to ten minutes. In some cases they remain open, and require to be closed with the hand. A more effectual, but less agreeable method, is to sit facing the patient, who is to fix his eyes on those of the physician.

Hypnosis being induced, suggestions are given to the effect that the patient will have no craving for liquor; that it will be disagreeable to the taste and unpleasant in its effects; that sleep, appetite and digestion will be good;that nervousness will disappear, etc. It is well to suggest that there will be no nervousness, no pain in the eyes, and no headache upon awaking, also, especially in the case of those who are hypnotized with difficulty, that there will be no drowsiness.

Hypnotism becomes easier with each repetition; and intoxication renders it easier. The treatments are repeated, if possible, daily for a week, then once a week for a month.

The results of treatment were: Remained abstinent, eight; relapsed, but abstinent after further treatment, three; relapsed and passing out of reach declining treatment, or continued to drink in spite of it, eight.

Bushnell has noticed that it is easy to render whisky repugnant to the senses of the patient, but it appears to be impossible to accomplish this in the case of beer. The loss of tolerance and cessation of craving for alcohol are reached, however, in the one class of drinkers as certainly as in the other.

Miscellany.

HOW DOCTORS' FEES ARE COLLECTED IN FRANCE.

Dr. C. had attended a "young person" who was recommended to him by a Mr. D. Failing to receive his fee from either the "young person" or Mr. D., he wrote to the wife of the latter, stating the circumstances and advising that she see the bill paid to avoid scandal. Receiving no re-

ply, Dr. C. sued for the amount of his bill, 420 francs, and Mr. D. sued the doctor for 5000 francs for betraying a professional secret. The Court decided that the doctor was entitled to 300 francs instead of 420, and decreed that it be paid by Mr. D. On the other hand, the Judge ordered the doctor to pay 300 francs to Mr. D. for violation of professional secrecy and grave inattention to his duties as a physician. The costs were divided equally.—Journal A. M. A.

THE HYGIENIC ASPECT OF WOOD PAVEMENT.

Mr. Wynter Blyth embodies in his last quarterly summery of the health of St. Marylebone a report on the above subject. It is, he observes, to be regretted that the several sanitary authorities in the metropolis have not during recent years kept records of the health of those of their employes, who have worked on the roadways in their districts in order that some statistical basis might be formed from which conclusions might in time be drawn. In the absence of any such data, Mr. Blyth has endeavored to contribute something to the knowledge of the subject by ascertaining experimentally whether the wooden blocks are saturated throughout with horse excreta, etc., or whether this pollution is superficial only. Taking as an index the amount of ammonia present in the upper, middle and lower slices of blocks which had been laid down in Oxford street for the last six years, and controlling his results by some of a new block of the same material, Mr. Blyth was able to demonstrate that in a block taken from the centre of the road the greatest pollution was found in the upper slice, although the block was as a whole permeated with the pollution. In the case, however, of a block taken from the side of the road by far the greatest amount of pollution w s found in the lowest slice, and in an amount much in excess of the block taken from the middle of the road. Mr. Blyth infers from this that the wooden blocks are by no means impervious, and that in process of time they become more or less saturated with impurity. The distribution, too, of the amonia points, it seems, to the fact that the moisture tends to penetrate the intervals beween the blocks in the middle of the roadway, and on reaching the impermeable bedding below tends to pass down to the sides of the roadway, and in this way to saturate the lowermost layer of the side blocks. Mr. Blyth, in conclusion, considers that for the purposes of health asphalt is the best form of pavement, since it, in all probability, is proof against the amount of saturation which he has demonstrated in wood. He recognizes, however, the very trying noise which the contact of horses' hoofs with asphalt produces, and in summing up the effect of any one pavement upon health this feature should certainly not be disregarded. Mr. Blyth, it seems, looks forward to the disappearance of our horse traffic from our streets, and to the substitution of vehicles propelled by other motive power. It will not then, he observes, be necessary to consider the pit-pat of the horses' hoofs upon the asphalt; nor, we would add, the pollution of wood pavement by equine excreta.

DANGER OF WINE DRINKING.

At the last meeting of the Societe de Medecine M. Lancereaux spoke on the danger of excessive wine drinking. He said that it was generally considered in France by the working classes that wine strengthened, and was necessary for all kinds of hard work. Consequently a large number of workmen absorbed three litres or more daily. At first no evil results are remarked, but at the end of a certain time vomiting occurs in the morning, the lips tremble, sensibility is modified n the limbs, and sleep is agitated, and this condition may last for some years.

Later, the viscera begin to be more or less affected, the stomach is inflamed, and the liver and the spleen become enlarged. The liver especially presents pathognomonic signs, the gland can be felt for two or three inches below the ribs, and frequently

as high up as the nipple, a character which applies to this affection. After several years of this condition cirrhosis sets in with all its consequences.

Excess of wine also predisposes to tuberculosis, which in such cases assumes a very rapid type on account of invasion of the lungs and the serous membranes.

To be just, added M. Lancereaux, all these disorders must not be attributed to the wine itself, but to its adulteration, for when the peasants drink the liquid of their own cultivation they are very rare.—Med. Press.

STERILIZED MILK.

When infants fail to thrive on properly diluted sterilized milk, the fault is not to be looked for in the sterile quality of the food, but in many other factors, among which an infected alimentary canal, and the venerable age of most city milk, are the most prominent to my experience. No length of boiling can destroy the chemical toxines found in all old milk, and not even the most perfect milk, taken from the cow or the human breast, can cure an infected alimentary canal.—Seibert, in the Polyclinic.

OVER-FEEDING OF INFANTS.

The great principle at the bottom of all successful feeding, viz.: that an infant is nourished in proportion to his power of digesting the food with which he is supplied, and not in proportion to the quantity of nutritious material he may be induced to swallow, is so obviously true that an apology might almost seem to be required for stating so self-evident a fact; but experience shows that this simple truth is one which, in practice, is constantly lost sight of. That that infant thrives best who is most largely fed, is an article of faith so firmly settled in the minds of most persons, that it is very difficult indeed to petrsuade them to the contrary. To them, wasting in an infant suggests the need of a large supply of food; in every cry means hunger, and must be quieted by additional food.—Eustace Smith in Archives Ped.

INFANT MORTALITY.

Aside from the ills which infant flesh is naturally heir to, much of the awful mortality is due to artificial conditions, which could be eliminated smply by the exercise of common sense. These conditions must be regarded as predisposing causes, and the most common as well as the potent are irrational care, improper feeding, and that irrepressible pestilence that stalketh at all hours—the purveyor of free medical advice.—Med. and Surg. Reporter.

ASSAULT ON A PHYSICIAN.

Dr. George Drury, of Broklyn, was called by telephone, last Saturday, to visit a person said to be at the point of death. He went to the place indicated, a house that had been for some time unoccupied, and was conducted by a man who opened the door to the upper floor. Here he was set upon by his conductor and another man, beaten and gagged and robbed of his money, watch and jewelery. The watch and jewelry have been recovered in a pawn shop in this city, and the authorities hope to apprehend the criminals. Another Brooklyn physician was called recently by telephone on an errand similar to that which led Dr. Drury into the trap. When he arrived at the house, a woman answered the bell and said that no one was sick there. Just as he was about to leave, a man came to the door and said that the sick person was upstairs. The doctor's suspicions were aroused however, and he refused to go inside.

We hope that we are not going to have an epidemic of assaults and robberies inflicted upon the members of our profession; but we learn from the daily press that Dr. Lawrence Coffin was, within a week, enticed into a house in New York City, and also stripped of his valaubles.—Brooklyn Med. Jour.

MIDWIFERY IN ENGLAND.

A young married woman died of post-partum hemorrhage at Tunbridge Wells last week, the midwife who atttended her having made ineffectual and unskilful attempts to remove the placenta before sending for a medical man. When the latter arrived he did what was necessary, but the woman died three hours afterwards. The case was made the subject of a Coroner's jury, and the jury directed the coroner to administer a severe censure to the midwife. —Med Press.

WHAT DISPOSITION SHOULD BE MADE OF IRRESPONSIBLE CRIMINALS?

At the recent meeting of the International Penitentiary Congress a question up for discussion was that of proper methods by which to protect society against irresponsible criminals, those who are recognized as having been mentally irresponsible at the moment when the crime was committed. The discussion concluded with the adoption of the following resolutions: (1) Special asylums should be established, or special departments of asylums set apart, for the incarceration of individuals, who have been acquitted, or whose sentence has been suspended, on account of mental aberration; (2) The principle should be recognized that liberation of insane persons, incarcerated in these special asylums or departments, can only be obtained by joint approval of the judicial, administrative and medical authorities.—North Am. Pract.

RECOVERY FROM A SEVERE ELECTRIC SHOCK.

A lineman of the Brush Electric Light Works at Rochester received a shock from a live wire carrying about 1500 volts on August 28. When picked up he was apparently dead, but was subsequently resuscitated by artificial respiration and other appropriate measures. In a few hours he appeared to have entirely recovered, except that he was suffering from a very severe burn on the arm. —Boston M. and S. Jour.

THE EFFECT OF REMOVAL OF THE OVARIES UPON THE SEXUAL APPETITE.

Dr. A. Lapthorn Smith, of Montreal, Can., has published in the Medical Record an account of a woman who acquired gonorrhea seven years after removal of her ovaries and tubes. According to her testimony her pleasure in sexual intercourse had increased rather than diminished since the operation of removing the ovaries and tubes, which is contrary to the general opinion on this subject.

FATAL EFFECTS OF HOT WEATHER.

Dr. Tracy, Registrar of Vital Statistics, reports that during the week ending August 31 there were 851 deaths in this city, the average for the corresponding weeks for the past five years being 775; 114 deaths were due to diarrheal diseases, and of these, 125 occurred in children under 5 years of age. This comparatively large mortality, while not at all excessive, was no doubt due to the very hot and humid weather which prevailed last week. The physicians of St. John's Guild report that in no week during the summer are so many very ill children under their care. The Sea Side Hospital at New Dorp, Staten Island, was filled to overflowing, so that it was impossible to accommodate many that should have been admitted there, and on the daily trip of the Floating Hospital on August 30, two deaths occurred among the infants on board.—Boston Med. and Sur. Journal.

By the death of Dr. Thomas Henderson Chandler in Boston, the profession of dentistry has lost one of its most distinguished representatives. He was generally acknowleged to be at the head of his profession in New England, and probably he was entitled to rank as high throughout the United States, where dentistry has made greater advances than anywhere else in the world.—Sunday's Herald, September 1, 1895.

The Times and Register.

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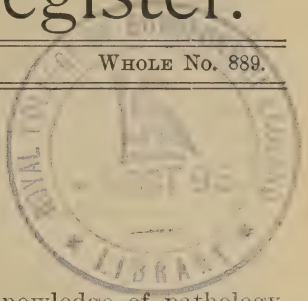

Original.

A PRACTICAL STUDY OF THE BLOOD AND THE CIRCULATION, WITH A HISTORICAL REVIEW OF THE SUBJECT AND ITS BRIEF CONSIDERATION FROM THE STANDPOINT OF ITS CLINICAL COMPOSITION, ANATOMICAL STRUCTURE, AND PHYSIOLOGY; INCLUDING CLINICAL STUDIES, AND EXPERIMENTAL RESEARCH ON THE LOWER ANIMAL.

BY THOMAS H. MANLEY, M. D., NEW YORK.

GENERAL CONSIDERATION OF THE BLOOD AND CIRCULATION.

The circulation of the blood, the haematic elements, the functions of the vessels, blood changes, its physical phenomena, in motion and the many complex phenomena which are connected with it, have, in all ages, been an attractive theme, to students or nature, and those devoted to the healing art and, of late years, since inventive ingenuity has placed in our hands, so many instruments of precision, by which we may not only determine with accuracy its precise physical properties, but the movement and changes in the corpuscular elements, fresh interest has been awakened, and probably in no system of the body, may we expect, in the near future, such extensive and significant revelations as through a study of those elements, which occupy and move through the vascular system.

It strikes one, as rather singular, that of late years, since the enormous expanse of knowledge of pathology, the creation of the science of bacteriology and far-reaching researches and analyses of the secretions that little or nothing has been given us, in the way of original study from a clinical standpoint, on the corpuscular elements of the blood.

It would seem, that an impression prevails, that this theme rather belongs to the domain of the physiologist than the clinician, and hence why we see so little contributed on this subject, except from those whose sphere is limited to dealing with the phenomena of the circulation in a condition of health.

The most notable exceptions to this, have been Heymen, whose great work, however, is limited in its scope, to the haematic elements, in health and disease, rather than to a consideration of the subject as a whole. Marey's work though a valauble clinical contribution and of great value, in considering the element of vascular pressure and the value of the sphygmograph; proceeds but little further. Norris, of Bermingham, and others, have dwelt at length on controverted questions; but never since the time of John Hunter has a work on the blood been written, which embodies the vast array of facts, suggestions and conclusions, which applied both to the pathological and normal process of the human body.

Since Hunter's time—the latter part of the last century—stupendous strides have been made in all the sciences. Laennae has given us the art of thorocic diagnosis, by the utilization of accoustics, the general custom of blood-letting has gone into desuetude; liquid medicines are di-

rectly injected into the circulation, either indirectly by the capilliaries, or drectly into the main, venous channels, themselves.

Hunter found, as he turned to pathological processes involving inflammation, that it was quite impossible, to consider them on a rational basis, without including, in his observations, those mutations which were essentially vascular.

In his time, free suppuration was regarded, as quite essential, in all extensive mutilations of the soft parts and pus was believed, to consist of the transformed elements of the blood; a view received of late, by those pathologists who confound pus corpuscles with leucocytes. Nothwithstanding, that a century has passed, since Hunter's unrivaled work was written, the main principles enunciated by that indefatigable philosopher, naturalist and surgeon, stand unshaken; although the progress of our knowledge, or those branches of medical science which constitute the ground-work of the healing art, have made great advances; there remain now, as then, many, unsolved problems, in connection with the living blood.

Its property of coagulation is not understood; whether a vital property or one of integral disintegration is not known. The impulse or stimulus, which keeps the heart in motion, is most certainly a mystery; though, we are acquainted with some of those conditions which influence it. What part the vessels play, per. se., in perpetuating motion is yet disputed.

The lungs, all are quite generally agreed, are the centres of combustion, the transformation or depuration of the blood; where carbonic acid is given off and oxygen is taken up; but, they no doubt, fulfill other important functions, for we know from repeated observation, that the inspiration of pure oxygen, is capable of affording nothing more, than the most transient and imperfect relief, in impending asphyxia, from any cause.

No one has yet been able to explain how the arteries become distended with gas immediately after the blood has been forced out one of them at the moment of death nor, how the capillaries can contract and expand, while they are composed of nothing more than a series of plates of endothelia.

Indeed, the circulation furnishes us with a vast unbroken field, since the era of microscopy has dawned upon us. So this branch of medical science we must turn for the solution of many important questions, which have been lately raised, and the solution of which, will go far towards illuminating many yet beclouded phenomena. To it we must turn to enable us to ascertain the origin, the development, the renewal and destruction of the haematic elements. So late as twenty years ago, we were taught that there were but two varieties of blood corpuscles, and now we know there are at least three, and perhaps four. Of the phagocytes we knew nothing. We were ignorant of the bactericidal property of the plasma and of serum immunizatior we were in profound ignorance.

From the mechanical or dynamic standpoint vast researches have been made on the vascular system, and great advances have been made through the aid of animal experimentation. We have come to regard the vascular system, as something more than a vast series of distributing conduits, subserving the circulation simply as dstributing channels; but, as structures highly endowed with vital functions of no less importance to the preservation of life than the great central organ, the heart itself, which while incapable of moving the blood current of itself without the cooperation of a subordinate character by the vascular system, and, therefore the circulation would be impossible. But if it can be demonstrated that in the human being, in whim the vascular apparatus attains its highest complexity of development, and the heart and vessels are reciprocally dependant on each other, in action through the studies and research, on the finer elements, will learn, that there is a more intimate relation and interpendence between the inner walls of the capilliaries and the haematic elements

than have formerly been supposed to exist to which attention will be directed, as we proceed under another title.

(To be Continued.)

Literature.—Heymel—Du Sang.
—Marey — Dynanigens du Sang.
—Norris—Corpuscles of the blood fugative group, etc.

BETANAPHOL-BISMUTH.

Von Heyden.

A NON-POISONOUS AND EFFICIENT ANTISEPTIC AND ASTRINGENT FOR THE GASTRO-INTESTINAL TRACT.

Dr. Louis Fischer, instructor in Diseases of Children at the New York Post-Graduate School and Hospital; visiting physician to the Messiah Home for Children; attending physician to the Children's Department of the German Poliklinik, in an article published in the Medical Record, July 13, 1895, and entitled "The Treatment of Summer Complaint, or Gastro-Enteritis Catarrhalis Acuta, including Cholera Infantum, in Children," says substantially as follows:

"Lavage of the stomach and irrigation of the bowels is to be recommended, in accordance with the method practiced by Prof. A. Beginsky and Dr. Hugo Neumann, of Berlin, and others. The stomach and bowels having been cleansed by nature's own methods, we must next try to aid nature in neutralizing the method above mentioned. Calomel and castor oil are of use; but bismuth is the sovereign remedy. I formerly used the drug in the form of the subnitrate, the salicylate and the sub-carbonate; but I give decided preference to the bismuth-betanaphtol. Formerly he was in the habit of prescribing naphtol with bismuth, but since the introduction of the betanaphtol-bismuth we have in this chemical compound a substance which, in my opinion, is the most valuable remedy that can be given to children. Betanaphtol-bismuth has been physiologically examined at the Imperial Institute for Experimental Medicine at St. Petersburg, and has been found by Professor Von Nencki to agree well with patients even after long continued use. Introduced into the stomach, it becomes party decomposed into naphtol and bismuth; a large part of it, however, passes unchanged into the intestines, where the acid reaction and the presence of the pancreatic juice complete the disassociation. The naphtol is but partly eliminated in the urine; the residue passes through the whole alimentary canal, and is finally excreted with the feces. The bismuth is entirely excreted as a sulphide with the feces. In no single case was any toxic effect observed, though daily doses of 75 grains were given for three weeks. It is indicated in all forms of bacillary diarrhea, in choleraic diarrhea, but especially in those forms of acute catarrhal gastro-enteritis that we are accustomed to see in our cities to-day. The antiseptic properties of the naphtol is combined with the astringent properties of the bismuth. Vomiting never follows the administration of the drug; nor has there occurred any other symptom directly attributable to its use which would contraindicate its use.

"I entirely agree with Professor Hueppe (Berliner Klinische Wochenschrift, 1893, No. 7), who lauds this new remedy as a powerful intestinal antiseptic, and recommends it as a specific in cholera.

"The fact that the phenols have been but little used for internal medication can only be explained by the fact that they are very poisonous in their free state. Their causticity, disagreeable odor and taste are neutralized by their combination with bismuth. These combinations when introduced into the system become decomposed; the liberated phenols exert their characteristic antiseptic effects, while the bismuth oxide combines with and fixes the toxic albumens in the intestines.

"A child one year old can be given five grains of betanaphtol-bismuth every two, three or four hours; a child half a year old should be

given these powders with a little boiled (sterilized) water, and preferably when the stomach is quite free from food. If there is a great tendency to vomiting, and the child does vomit the first or second dose that is given, it is my custom to immediately follow the vomit by another dose of the same quantity. Opium, in the form of Dover's powder, is indispensable sometimes, 1-10 to 1-3 of a grain being given with each dose of the bismuth. If vomiting persists and cannot be controlled by medication, I resort to rectal feeding; and the betanaphtol-bismuth can be administered per rectum, in suppository, double the oral dose being employed."

TANNIGEN, AN ACETIC-ACID COMBINATION OF TANNIN.

By E. W. BING, M. D.,
Chester, Pa.

. This is a new remedy, introduced by Professor Meyer and manufactured by the Farb. u. Fried. Beyer Company. It has been used for about a year and a half, for various disorders of the mucous membrane, especially in affections of the intestinal mucous membrane. This substance occurs in the form of a fine, light, grayish powder, odorless, tasteless (except for a slightly astringent taste), and somewhat hygroscopic. It is insoluble in dilute acids and cold water, and slightly soluble in ether and hot water. It is freely soluble in alcohol and in dilute alkaline solutions, which, as we should see, explains the fact that it passes unchanged through the stomach, reserving its action until the intestinal canal is reached.

Tannigen is of great value in all relaxed conditions of this canal, as a simple but powerful astringent, acting as soon as it leaves the stomach, with gradually increasing effect until the result is obtained. It causes no gastric disturbance, having no irritant character; it may be therefore used in persons of all ages, and always with a good result. It is especially in profuse watery diarrhea that Tannigen is serviceable. In ordinary crapulous diarrhea it does not seem so effective, although it has a beneficial effect. In irritated or inflamed conditions of the bowels it not only lessens the number of passages, but also tones up the mucous membrane. Many cases could be mentioned where it has reduced the number of stools to one-half in a few hours, thus enabling the patient to gain rest and strength. That it has greater power than the astringents in common use is demonstrated by the fact that it has always proved effective after the others have failed. In combination with pepsine, or the pancreatic preparations, it acts nicely, the former relieving the gastric irritability, while the latter exerts its action in the intestines. The astringent action also is valuable as a means of gaining time, so that remedies addressed to the exact pathological condition may be made use of. Under the action of Tannigen the stools become "formed," and odor is removed.

Besides its almost specific action on bowel disorders, it is useful, both as a local and general astringent in chronic inflammatory conditions of the upper air passages, as rhinitis, pharyngitis, etc.

The dose varies from 0.2 to 0.5 gm., three times a day; and larger doses still have been given without any disturbance or untoward effect. It may be continued for a long time if necessary, and is especially suitable for treatment of children on account of its freedom from taste. In conclusion a statement of its use in some cases of diarrhea may be added:

A. B.,a child four weeks old,was attacked with diarrhea. The various metallic and non-metallic agents were used, such as sulpho-carbolate of zinc, bismuth, chalk, opium, krameria, etc., but gave no relief, the stools numbering about twenty in the twenty-four hours After continuing with these for a week with no improvement Tannigen was tried. Its effects were evident in a few hours; the number of passages dropped to one-half and at the same time became of better consistence, and the diarrhea was cured.

G. W., a dyer by trade, had so

many evacuations in the day, and was losing flesh so rapidly, that tuberculosis was suspected. He did not improve on the usual remedies, and so Tannigen was given in doses of four grains four times a day. Immediate improvement occurred, and a continuance of the remedy for a few days resulted in a cure. Other cases might be cited, but these show the action of the remedy on intestinal disorders, and the mention of others would be superfluous.

As stated above, its beneficial action and effect is not limited to the intestinal mucous membrane, to the exclusion of other membranes of that character, but is also exerted on these, for instance, in inflammations of the bronchial mucous membrane. I have found Tannigen of service in bronchorrhea, in elderly persons, reducing the amount of expectoration, and consequently saving the patient from the constant exertion of coughing; in other words, giving him a certain amount of rest.

As an instance of its effect on the air passages, it has been found useful in hay fever used as a snuff, it controls the sneezing and the flow of mucus from the nasal passages, and used either by itself or combined with cocaine, menthol, one or both, in proper proportions, it constitutes one of the most effective and agreeable remedies for the purpose. The writer, being subject to attacks of this nature, and having tried many combinations, found that Tannigen gave quicker and more permanent relief than any of the other drugs. Acting on this belief in its efficacy it was used in the following case:

L. R. had for a number of years been affected with a severe attack of coryza, sneezing and irritation generally of the air passages. The attacks were violent and caused great annoyance. They lasted for about an hour, and came on every morning on stepping out of bed. This seemed to be an excellent case for testing the virtues of Tannigen, since by failure of other means tried, the patient was getting tired of treatment. It was ordered by itself, as a snuff, to be used three times a day. The first application gave relief, and a few days' use brought a cure, which seems permanent. With results such as these it is altogether probable that it would prove serviceable in the treatment of that bugbear of practice, "gleet." I am not aware that it has been tried, but shall certainly make use of it in such cases, with a firm belief in a good result. B.

Society Reports.

ANNUAL MEETING OF THE MISSISSIPPI MEDICAL ASSOCIATION, AT DETROIT.

The annual meeting of the Mississippi Medical Association, which has just closed its session, was a great success in every particular. The eminent profession of Detroit, with the whole-souled, genial Dr. H. O. Walker as chairman of the committee on arrangements, spared no pains and stopped at no expense to make the social side of the event one never to be forgotten by those whose good fortune permitted them to attend. Receptions, drives and excursions were given every day, after the meetings closed. The hotels made ample provisions for the great number of visiting physicians, who gathered in Detroit in great numbers from nearly every State in the Union, besides several from Canada and other places. The citizens and public officials left nothing undone to have the strangers feel that they were among friends and a hospitable people.

The scientific part of the programme was on a high level, and probably at no gathering of physicians anywhere this year was a larger number of more practical and original essays presented.

On Tuesday evening Professor T. A. McGraw read an essay of high scientific value, on cancerous neoplasia, a subject of late years of great interest to all who are called on to deal with malignant growths.

Wednesday evening Professor William Pepper, the ex-provost of the

University of Pennsylvania, gave an elaborate resume of the life and times of Dr. Sam. Drake, the great medical pioneer of Kentucky. In the course of his address the learned professor touched, with more or less fullness, on many important questions concerning physicians, the public health and medical education.

Dr. William N. Wishard, the president, left nothing undone to satisfy the most exacting member. His rulings were marked by firmness, but always directed in the interest of fairness. To him and his energetic coadjutor, Dr. F. C. Woodburn, all are indebted for the unusual success of this year's meeting.

The topics of discussion were divided into two sections: A medical and one surgical. It would be invidious to attempt to decide which, in the largest measure, yielded the most abundant fruit; it is quite enough to say that the interest in both was well maintained, though, for the first time in late years, it was noted that the pendulum is beginning to swing the other way, and practitioners are turning once more to their old love, for the attendance was much larger at the medical sessions, which were held in the reception parlors of the Cadillac Hotel, than at the surgical, in the Strassburg. Probably the immense impetus given to internal medicine since the new seropathic theraphy has gained such sway, physicians are inclined rather to look to this promising agency for remedial effect, in many cases, than to the more mutilating and uncertain methods of surgery. The programme in the medical section was a strong one, and the participants were generally of a class calculated to command respect and close attention. Here the essays were well prepared, and fully delivered and discussed with unusually energy and ability.

In the surgical section, though many names were down for contributions but few reported. Nevertheless, very many important topics were taken up and considered with marked ability by many of the best-known and eminent surgeons in this country. Notably so was the question of the treatment of fractures of the extremities; operative treatment of reducible hernia, by Dr. Charles A. L. Reed and others. Appendicitis came in for its usual conflict of opinion, and genito urinary surgery was dealth with at length. Dr. B. Merrill Ricketts, of Cincinnati, described a valuable and simple operative device for the cure of prolapse of the anus. On Thursday evening the well-known surgeon and distinguished ex-president of the American Medical Association, Dr. H. O. Marcy, of Boston, operated at St. Mary's Hospital for aneurism of the right common carotid. The operation was performed with singular skill, and the following day the patient was in excellent condition.

The attendance of medical editors and their representatives was large, and full official stenographic reports were taken of both general sections.

Never have we seen better arrangements for exhibitors, who had made provisions for a marvelous display. The surgical instrument maker, the book firms and proprietary medical firms spared no pains to give their goods all that could accrue from being presented in an attractive form, by lively, wide-awake and go-ahead salesmen. On the whole, this year's meeting of this great medical society must be conceded as a superb success, not readily to be forgotten by those who attended; nor can they readily forget the upen-hearted hospitality which all enjoyed from the profession of Detroit.

SUDDEN DEATH IN CONSEQUENCE OF A URETHRAL INJECTION OF COCAINE.

In the Centralblatt f. Chirurgie we find an account published in La France Medical by M. Reclus, of a case in which sudden death followed an injection of about six drachms of a five per cent. solution of cocaine into the urethra. The urethal mucous membrane appeared to be quite intact, and the death was attributed to pronounced arterio-sclerosis and to the undue quantity of the drug employed.—N. Y. Med. Jour.

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PHILADELPHIA, SEPTEMBER 21, 1895.

Commencing with this issue we publish a series of very interesting articles on the blood from the pen of Dr. Thomas H. Manley, of New York. The articles are the results of untiring research for the past months, of Dr. Manley, and exhibit much thought and careful investigation.

We trust our readers will appreciate our endeavors to secure for their benefit such original material as we have printed during the past year on several occasions. What "The Times and Register" strives for is to publish that which will be most useful to the general practitioner, and while we do not expect to satisfy everybody with every issue, we do believe that within the scope of our two volumes a year there will be plenty of material which will be of practical value to every medical man, worth many times the price of the subscription.

III. A SUMMARY OF THE MORE SALIENT MEDICAL AND PRACTICAL CONSIDERATIONS OF CYCLING IN RELATION TO HEART DISEASE.

Dr. Benjamin Ward Richardson, in the last issue of "The Asclepiad," sums up the subject as follows:

The subject of heart disease from cycling is so novel, so little time has been allowed for observation upon it, and the morbid anatomy arising from it has, as yet, been so nearly nil, I may be very brief on the head of practice. I will say a word or two before leaving the paper to your criticism.

Firstly—Cycling, when carried on with the moderation, may, in so far as the healthy heart is concerned, be permitted, or even recommended by practitioners of the healing art.

Secondly—In every case of heart disease it is not necessary to exclude cycling. It may even be useful in certain instances where the action of the heart is feeble, and where signs of fatty degeneration are found; since increased muscular exercise often improves the condition of muscle, and of no muscle more than the heart itself.

Thirdly—As the action of cycling tells directly upon the motion of the heart, the effect it produces on that organ is phenomenally and unexpectedly great, in regard to the work it gets out of it.

Fourthly—The ultimate effect of severe cycling is to increase the size of the heart, and to render it irritable and hyper-sensitive to motion, the cycling acting upon it like a stimulant.

Fifthly—The over-development of the heart under the continual over-action and extreme over-action affects, in turn, the arterial resilience,

modifies the natural blood pressure, and favors degenerative structural change in the organs of the body generally.

Sixthly—A fact that has only been incidentally noticed in this paper is worthy of notice—namely, that in persons of timid and nervous natures, "neurotics," the fear incidental to cycling, especially in crowded thoroughfares, is often creative of disturbance and palpitation of the heart, and ought to be taken into account in preventive advice.

Seventhly—In advising patients on the subject of cycling it is often more important to consider the peripheral condition of the circulation than the central. Enfeebled or worn-out arteries, that is to say, are more dangerous than the feeble heart, and, when connected with a heart that is over-active, are seats of danger. This same remark would, of course, apply to cases where there is local arterial injury, as in aneurism.

Eightly—Venous enlargement seems rather to be benefited than injured by cycling, and conditions marked by sluggish circulation through veins are often greatly relieved by the exercise.

Ninthly—There are three sets of acts which are most injurious in cycling (a) Straining to climb hills and to meet head-winds. (b) Excessive fatigue. (c) The process of exciting the heart and wearing it out sooner by alcoholic stimulants, to the omission of light, frequently repeated, and judiciously selected foods.

Lastly—The time has arrived when practitioners of medicine everywhere should make observations for themselves that confirm or confute these observations, adding to them many more that I, of necessity, have omitted, in the brief period at my command.

THE TREATMENT OF FRACTURES.

Dr. Beddoe (Lancet), after a careful consideration of twenty-nine cases of Pott's fracture and fracture of the shaft of the femur, concludes that the object to strive for in the treatment of fractures is to replace and fix the bone in its original position. This cannot always be done by means of splints. To go on treating fractures by such means in the face of the results of the cases tabulated can be justified only if there was no other method of treatment at our disposal. There is one other method which offers a prospect of perfect cure, and that is to cut down upon the seat of fracture and unite the fragments by screw or wire in the exact relation that they occupied previously. The only possible objection to this will be raised by those who are doubtful of the success of their aseptic precautions. As a result of comparison of the two methods of treatment, the operative method is infinitely superior to the mechanical.

THE TREATMENT OF ELBOW-JOINT FRACTURES IN THE POSITION OF ACUTE FLEXION WITHOUT SPLINTS.

Smith (Boston Med. and Surg. Jour.), from the evidence of experimental fractures, and the results of clinical experience, arrives at the following conclusions in regard to fractures in this situation:

1. All fractures of the lower end of the humerus, once in position, are held in place if the forearm is kept acutely flexed.

2. Such flexion can be used without danger to the limb or undue distress to the patient.

3. The only force required being one of flexion, no rigid apparatus is needed, it being sufficient to strap the forearm to the arm. One of the strong points of this treatment, therefore, is its perfect simplicity.

4. The points to emphasize are: Be sure to replace fragments as flexion is made, taking great care that the internal condyle is as low as possible and the joint not widened by effusion between fragments. If the condyle is kept down no gunstock deformity can occur.

5. In the cases thus far treated the amount of motion gained has been slightly greater than after ordinary methods. The amount of deformity has been very much less.

Surgery.

IN CHARGE OF
DR. T. H. MANLEY, New York.

THE PULSE IN CLINICAL SURGERY.

The Revue Internationale de Medicine et de Chirurgie Pratiques contains a review of a work by M. Francois Bertonnier on this subject (N. Y. Med. Jour.). In this interesting work, says the writer, the author first recalls Marey's statement as follows: "The pulse is the sensation of sudden swelling felt by the finger which palpates an artery. The blood-vessel that allows itself to be depressed becomes suddenly hard each time that a systole of the heart increases the arterial tension." Bertonnier then considers this physiological phenomenon with regard to its frequency, its power and its rhythm. In two chapters he explains the connection between the pulse and the temperature, also the usefulness of examining the pulse in cases of severe hemorrhage. His principal conclusions are the following:

1. The discordance of the two curves, that of the temperature and that of the pulse, is often an indication of a serious condition.

2. In grave hemorrhage the great depression of the pulse that accompanies it has sufficed occasionally to indicate the true diagnosis.

3. In traumatic shock or that following an operation the degree of slenderness, of frequency, and of irregularity of the pulse will be the most exact measure of the violence of shock and of the patient's vital resistance.

4. In traumatic crania-cerebral lesions extreme slowness of the pulse is a never-varying sign of concussion, of contusion, or of cerebral compression. Eventually, its acceleration with elevation of temperature is a sign of meningo encephalitis.

5. The pulse should often be a guide in surgical interference in traumatic or inflammatory affections of the abdomen.

6. The absence of arterial pulsation at the extremity of a member is a very important sign and calls for a prompt determination.

Finally, the pulse, under the influence of chloroform, by its irregularity, intermittence, and arrhythmia, indicates, even better than auscultation of the heart, that the valvular lesions are badly compensated for, and that there is danger in the administration of chloroform.

THE TREATMENT OF SEVERE NOSE-BLEED.

Miot (Rev. internat. de Rhin. v.). The author states that severe bleeding from the erectile tissues of the nose is best checked by positive interstital electrolysis. Ths method can be employed, whether the hemorrhage is from a small or large area. The nature of the needles employed is practically a matter of indifference, though he believes that those of silver or copper are the most efficacious. The intensity of current employed ought to run from sixteen to twenty milliamperes, and the duration of each seance may be from eight to ten minutes. In exceptional cases three or four sittings may be necessary. Hemostasis in this region can be brought about without any bad results, though there exist between this region and the brain important vascular relations.

THE TREATMENT OF HEMORRHOIDS.

Dr. Claude A. Dundore has an interesting article on the treatment of hemorrhoids in Mathew's Quarterly, in which he presents the following conclusions, based upon a large correspondence with American surgeons:

1. The ligature is the safest method, as there is less likelihood of its use being followed by hemorrhage strictures or ulcers.

2. The clamp and cautery causes less pain and a shorter convalescence, but hemorrhage and stricture of the rectum may very often follow its improper application.

3. Whitehead's method should be limited to those cases in which the entire circumference of the anus is involved. In ordinary cases of one or

more hemorrhoids it should never be used.

4. Simple dilatation of the sphincter, injection of carbolic acid and Manley's method are merely palliatives.

SPRAINS AND THEIR APPROPRIATE TREATMENT.

Primrose (Canadian Practitioner) holds that the aim of treatment for sprains is the early absorption of effused material and the prevention of adhesions. For the immediate treatment of a recent sprain pressure is of paramount importance. This should be applied as follows: The joint—say the ankle, for instance—is placed at a right angle (or, if possible, at less than a right angle) with the leg, then cotton-wool or ordinary cotton batting is applied evenly over the foot from the toes upward to the middle of the leg. The amount of wool must be considerable, loosely applied; it should be fully three inches in depth. Over this is applied the bandage from the toes upward, which is drawn as tight as possible. There is no danger of making too much pressure, provided there is sufficient cotton-wool. This usually alleviates pain immediately by affording pressure to the blood-vessels and keeping the part at rest. The bandage and wool are removed at the end of a few days, a week at the longest, and carefully instituted passive movement is employed; then the dressing is reapplied to prevent further effusion. In ten to fourteen days cotton-wool may be dispensed with and the support of an ordinary flannel roller substituted. The patient is able to use the injured joint for ordinary purposes after the lapse of about three weeks in the majority of severe sprains. In sprains of slight severity massage may be begun at once with excellent results, and in old sprains massage is by far the most appropriate treatment and indispensable in order to effect a cure. Heat and cold are at best temporary methods of relieving congestion, and do harm if employed too long.

EXTRA-UTERINE PREGNANCY.

At the last meeting of the Academie de Medecine M. Pinard related a case of extra-uterine pregnancy which ended successfully, both for the mother and child, after operation. A woman, aet. 36, entered the hospital in the ninth month of pregnancy. On examination it was found that the fetus was outside the uterus. Laparotomy was immediately performed by the speaker, and the child extracted from a very vascular cyst; the walls of the cyst were sutured to the abdominal wound, care being taken by the operator to includes the edges of the placenta. The results of the operation were very simple: the elimination of the placenta was effected at the end of a month spontaneously, and on the forty-third day the patient had entirely recovered. The child was doing well.

INFLUENCE OF LAPAROTOMY ON TUBERCULOUS PERITONITIS.

Surgical intervention has profoundly modified the prognosis of tuberculous peritonitis within a comparatively short time. From recent statistics of Roerset (Archive de Med. Exper. and Journal of the American Medical Association, May 25, 1895), it seems that of 308 patients operated on 22.5 per cent. examined one year after the operation were perfectly cured. "We have cases cured for twenty-five years." (Spencer Wells.) The cases were genuine tuberculosis in those of Buzy, Conitzer, et al. The bacillary researches and inoculations were positive. What is the process of cure? Stchegoleff, operating on dogs in Strauss' laboratory, concludes:

1. Tuberculous peritonitis of dogs may be cured by laparotomy alone, and at the beginning of the process twelve to fifteen days after inoculation.

2. Recovery is due to an inflammatory reaction characterized by infiltration of embryonal cells; the phagocytosis is the active development of connective tissue.

3. Curative action seems due to a variety of physical agents—traumatism of the peritoneum, thermic influ-

ences, penetration of light and air into the peritoneal cavity.

4. The complete evacuation of the abdominal exudate is not the sole cause of recovery.

5. The dog is an animal somewhat feeble and very susceptible to tuberculosis if we use cultures of human tuberculosis.—University Medical Mag.

HYSTERECTOMY FOR FIBROIDS.

One of the most decided advances in abdominal surgery has been the revival of the operation of hysterectomy for fibroid disease of the uterus. When we consider the excessive size which the tumors attain, and the emaciation and hemorrhage to which they give rise, we can imagine how much pain and inconvenience, without any change or relief, was formerly undergone by women still young when suffering from this disease. The danger of the operation, as then practiced, made it impossible to advise any patient to submit to it, and in its place the operation of oophorectomy was recommended. This, however, often failed to produce any diminution in the size of the tumor and consequent discomfort. By the introduction of the intra-peritoneal method of treating the stump, and by the general improvement in the management of abdominal cases, the operation is now one which may be urged on all patients in whom the tumor is increasing in size, since the risk to life of a skillfully performed operation is very slight. Your correspondent has recently operated in two cases successfully by the following method: A full incision is made in the middle line opening the peritoneum; both ovaries are then removed after their pedicles have been tied with stout silk. The uterine arteries are then felt for, and secured by ligatures and passed beneath each, as low down as possible. Two flaps are then cut from the front and back of the tumor, immediately above the cervix, and the whole of the tumor is rapidly removed just above the end of the cervix; the bleeding is usually quite slight and stops on pressure. The edges of the flaps are then tucked in and united together with fine silk sutures. The rents in the broad ligaments are also united and the stump dropped back into the pelvis. The cut surface of the uterus drains through the patent cervical canal, and if any bleeding occurs, it will do so into the vagina, and not into the peritoneal cavity. The only trouble from which the patient suffers, after this operation, is a tendency to flatulent distension owing to the change of position of the intestines. This is easily controlled by passing a flatus every 4 or 5 hours until the bowels act. The patients are allowed to leave their beds between a fortnight and three weeks after the operation, and are quite convalescent at the end of a month. In the old method of hysterectomy, by means of a serrenoed, the wound was not healed for nearly two months, and during the whole of that time there was a danger of septic absorption.—Calcutta Medical Recorder.

CHRONIC SEMINAL VESICULITIS.

This is a subject that has been much overlooked by authors and practitioners alike, and the writer of this paper, who has devoted considerable attention to the matter, considers that many of the complications of gonorrhea, which are ordinarily called cystitis, prostatitis, etc., are in reality affections of the seminal vesicles. In this communication he discusses only the chronic variety, omitting entirely the acute and subacute. After a word or two devoted to the anatomy of the parts, he mentions that there is a good deal of doubt as to the exact function played by the vesicles, since the dilated ampullae which occur at the base of the vasa deferentia amply suffice for storage of the seminal secretion. The symptoms of chronic vesiculitis, which is considered as the male analogue of salpingitis, are increased frequency of micturition, with pain in the neck of the bladder, increased on defaction, especially if the motion is hard. A glairy discharge from the urethra may also be present when an action of the bowels occurs,

and nocturnal emissions are often produced. The diagnosis from chronic prostatitis, which it closely simulates, is only to be made by a careful digital examination of the vesicles through the rectum, made preferably when the bladder is distended. They are then easily to be felt, and are noticed by the patient to be distinctly tender or even very painful. By pressure they can be emptied, and this may lead to a discharge from the urethra of glairy fluid, perhaps containing dead spermatozoa. If the patient is made to urinate immediately afterwards and the first portion is received in a separate vessel from the remainder, it will be found to contain a variable amount of this muco-purulent fluid. As to treatment, the author recommends the plan apparently first suggested by Reliquet in the Gazette des Hopitaux in 1879, of systematically emptying the vesicles by means of pressure through the rectum with a distended bladder. This is performed at first every four days, but later on need be done only once a week, the discharge being said to diminish rapidly. In addition, the injection of nitrate of silver into the deep portion of the urethra is thought advisable, commencing with a weak solution and going on to one containing twenty grains to the ounce. Possibly some of the fluid enters the vesicles, and the author thinks that this is not undesirable. The prognosis is considered to be on the whole good, although convalescence may be delayed.—Edmund E. King, M. D., in the Canadian Practitioner, July, 1895.

Medicine.

IN CHARGE OF
DR. E. W. BING, Chester, Pa.

WHOOPING-COUGH; ITS GREAT FATALITY, AND THE NECESSITY FOR ISOLATION AND REST IN ITS TREATMENT.

The author first of all draws attention to the neglect which this disease meets with generally at the hands of the profession, both in the matter of treatment and, above all, in the want of due care as to proper isolation to avoid its spread. In an elaborate series of statistics drawn from the death returns published in various countries he finds that the actual number of deaths resulting often nearly equals, and in some cases exceeds, the mortality due to scarlet fever and measles, yet he is careful to emphasize the much wider distribution of whooping-cough. In particular he remarks that a ten years' record in New York shows 4094 deaths from pertussis against 4062 from typhoid fever. At certain ages the mortality is greater than in scarlet fever, and in some epidemics it is quite as great at all ages. In some epidemics it has reached 48 per cent.; under one year the rate is 25 per cent.; one to two years, 13.8; two to five years, 3 per cent. As to the causes of death, pneumonia heads the list, then convulsions, next asthenia and marasmus, and then a great drop takes place, when diarrhea, asphyxia, tuberculosis, pulmonary and, lastly, cerebral congestion claim a much smaller number of victims. In summer, convulsions and cerebral causes claim the greater number of their victims; respiratory lesions are about equally common all the year round. Dr. Helen Knight, after a careful daily study of forty cases, dwells upon the disturbance of the heart and the circulation due to the violent and recurrent paroxysms; this is shown by the increased rapidity, irregularity and dicrotism of the pulse and its sustained tidal wave. In the lungs there is the primary naso-pharyngeal catarrh, which may spread into each cavity opening into the respiratory tract. In the heart there is dilitation of the right heart, pulmonary congestion and diminution of blood in the left heart, and in the systemic circulation, due to the long-drawn inspiration, while with the expiratory cough the heart is compressed, the venous system is engorged, the blood is forced into the left ventricle and the aorta, the heart is emptied, its sounds and the pulse are weakened. This finally results in a permanent dilatation of the ventricles, with an increasing weakness of the walls. These causes

gradually establish a cerebral congestion and edema, the cause of fatal eclampsia and albuminuria. The pulmonary congestion precedes the bronchial catarrh, which extends into the alveoli. The rarefaction of the air leads to changes in epithelial growth and aids in producing the catarrh of the air-passages. The traumatism of the mucous membrane from the cough has its own effects. Lastly, as increasing sources of exhaustion are the vomiting and inability to retain food, which are largely responsible for the asthenia and marasmus so characteristic of all bad cases, and which are alone the cause of death in many. In treatment the first point of all to recognize is that it is a specific contagious disease and must be treated as such. The study of the temperature is a test of the gravity of the disease and of the onset of complications. Above all things, rest is absolutely imperative, and, where possible, in bed in a warm equable temperature, with the patient warmly clad. Instead of resorting to the open-air treatment, the patient is far better kept in bed and fresh air secured by proper and efficient ventilation. The author finally winds up a valuable paper by insisting as strongly as he can upon the necessity for prompt and efficient isolation.—W. W. Johnston in Archives of Pediatrics, April, 1895.

HOUSES OF CANCER.

In a resume of the subject (l'Antisepsie, III, 1894, p. 234) some interesting cases were cited. In a street of Cormeilles, of 54 houses, 17 have furnished, within 40 years, 21 cases of cancer; 15 of these occurring in the last 20 years, with 14 cases from 7 houses. A history of relationship did not exist between the cases, but they occurred in those inhabiting successively the same locality. A house in Lyon, on the banks of the Saone, is still more interesting. The proprietor died of cancer of the stomach, four years after a tailor died of the same disease, and the porter three years after this. A man occupying the second story of the house died of cancer of the cervical glands two years later.

In a house in Ashburton, England, reported by Shuttock, there were four deaths from cancer, none of the cases being related. Clement Lucas reports three cases. The husband had cancer of the lip, the wife later developed cancer of the breast, and a lady who frequently visited them died of epithelioma of the tongue. Winter Blyth reports three similar cases.

Dr. Archy Powers contributes three cases. Miss B—— died of cancer of the stomach; Miss T——, who occupied the same room and bed, died of cancer of the liver; and Miss J——, a subsequent occupant of the room, died of cancer of the breast.

Are we to see in these facts coincidences, or is the theory of the parasitic origin of cancer the correct solution?—Am. Med. Surg. Bul.

INCREASE OF CANCEROUS DISEASE.

In England the death-rate from cancer has increased in the interval between 1865 to 1889—24 years only—from 37 to 64 per 10,000 of population. In London the increase was from 50 to 79. In Berlin it has increased from 62 to 67 in the brief period from 1864 to 1892, less than 30 years! In Vienna the increase for 1864 to 1890 is from 100 to 123, in Munich from 93 to 104; in New York, from 40 to 53; in Philadelphia, from 40 to 55; in Boston, from 31 to 55; in New Orleans, from 42 to 66, and in San Francisco, from 27 to 64.

These are taken from a recent lecture by Dr. Joseph Bryant, of New York. His conclusions are worthy of serious consideration:

1. The death rate from malignant disease is constantly and rapidly increasing.

2. The death rate is larger in cities, irrespective of transient patients, than in the country.

3. In limited portions of the country and in some cities the death rate is strangely and disproportionately large.

4. The increase demands urgent consideration by physicians and proper legislation to combat its spread.

5. Better post-operative prognosis can be attained by proper education of the people in regard to curability by early operative treatment and by prompt action of the profession.

My experience abundantly confirms the conclusions of the author. It is said that when Mr. Tait opens the abdominal cavity and finds malignant disease he immediately closes the wound and does not disturb the mass. I have at least a dozen living condemnations of such practice. Cancerous tumors of the ovaries I have often removed when the pedicles were long and few adhesions were present and the women did as well as in other sections, and many have remained well. Mr. Tait has also condemned vaginal operation for cancer of the uterus. I can produce many scores of women whose undoubtedly cancerous uteri have been removed from a few months ago to as many as 12 years ago, and they are in perfect health. This disease is often local and early hysterectomy unquestionably cures. Every woman who at the menopause has other than a painless, odorless, harmless cessation of the menstrual flow ought to be carefully and frequently examined by an expert gynecologist with special reference to the early recognition of malignant disease. There is no other disease in which the importance of early dagnosis is so great as in uterine cancer—The Medical Fortnightly.

EFFUSION AND ABSORPTION.

Hamburger (Virchow's Archiv, August 5, 1895), points out the part that limitation of absorption plays in the production of passive effusions. The process of absorption is not a vital but a purely physical process; all tissues, living and dead alike, can take up a certain amount of fluid by imbibition, either molecular, where the fluid is taken up by a homogeneous mass—for example, gelatine—or capillary, where the fluid is taken up by the pores of a porous mass, for example, porcelain, or connective tissue. Given fluid in a pleural cavity, the cement substance between the cells, or even the cells themselves, take it up by molecular imbibition; then, by capillary imbibition it is drawn into the connective tissue, and thus reaches the lymph stream. This process, however, ceases unless the fluid thus drawn up be quickly taken into the blood stream, and carried away, for a limited quantity of tissue can take up only a limited quantity of fluid at a time. It is well known that quickening of the blood stream favors absorption, and it is the slowing of the blood stream, which by its purely physical effect in limiting absorption is an important factor in the causation of passive effusion.

A TEST FOR DISTINGUISHING BETWEEN SEROUS EXUDATIONS AND SIMPLE TRANSUDATIONS.

Rivalta (Rif. Med., April 24, 1895) finds that if a drop of glacial acetic acid is added to a serous exudate (that is, an inflammatory effusion) a slight white cloud forms in the wake of the falling drop, which precipitate redissolves on the addition of more acid. No such reaction takes place in mere transudation, that is, non-inflammatory fluids. A good way of doing the test is to let fall a drop of the suspected fluid into 200-400 c. cm. of distilled water, acidulated with 2 to 4 drops of glacial acetic acid. If the fluid is an inflammatory exudate a whitish streak follows the falling drop, and on the addition of more acid is dissolved. Examination of the precipitate shows that it belongs to the class of nucleo-albumins. The author's method presents a clinical advantage, in that a mere drop or two of the fluid (such as can easily be withdrawn with a hypodermic syringe) suffices to provide material for the test.

FROM

German Exchanges

BY DR. F. E. CHANDLER,
Boston, Mass.

SODA WATER AS A GERM DESTROYER.

Dr. Francesco Abba in a most elaborate article in the Rivista l'Igiene demonstrates the fact that common soda water at a tempera-

ture of 4 degress C., will destroy the bacilli of cholera and of typhoid in respectively three and eight hours time.

The practical utility of this discovery is immense. In the future we shall need only to pack our typhoid patients in a tub of ice and salt, and after giving them plenty of water to drink, then charge it with CO2 by a stomach tube, and the bacilli will be killed and the patient cured!!!

In La Semaine Medicale is a report of the results of injection of blood serum of animals inoculated with the streptococcus of erysipelas in cancer. Good results were obtained in recent and in recurrent growths. An increase of temperature was a rare concomitant.

Bar and Renon. Presence of Koch's bacillus in the blood of the umbilical vein of a fetus born of a tuberculous mother (Societe de Biologie, seance in 29 Juin, 1895).

In five cases blood from the umbilical vein was injected. The results were negative in three cases. The children all died shortly after birth and Koch's bacillus was demonstrative in the viscera of one.

The mothers were all in the advanced stages of phthisis.

Gilles de la Tourette and Gasne (Rivista I'Igiene), chronic intoxication with coffee.

The alterations which follow the abuse of coffee have a striking analogy to those which follow the abuse of alcohol.

Simple dyspepsia from coffee goes on to chronic gastritis, but without producing an ulcer. The pulse is slowed, the sleep impaired, there are sensations of fulness of the head and vertigo. Finally in advanced stages, muscular tumors of the extremities and of the face with nocturnal cramps, and a diminution of sensibility make their appearance. The accidents from coffee are however far less serious than those following the use of alcohol for upon suppressing the cause they lessen and finally disappear.

P. Tessier (Journal of the Academy of Sciences, Paris) speaks of a case of pernicious anemia in a man just returned from Guiana. Diarrhoea and intestinal fever were well marked symptoms in the case. Angullidae stercorates were found in the feces, and chiefly in the form of embryos. On examination of the blood similar embryos were found, and after a course of treatment disappeared, and the patient made a complete recovery.

In Salerno the Common Council recently voted the sum of $16 to each of the cantonal physicians in remuneration for their services in vaccinating a large portion of the populace on the occasion of a smallpox scare. The Mayor, a man of most enlightened views, promptly vetoed this, and the medical men will now, as heretofore, continue to vaccinate allcomers, the family of the Mayor preferred.

Freudenberg (Wiener Klin. Wochenschrift), highly recommends the use of cantharidin in bladder troubles. The following prescription is the one he uses almost invariably:

R Cantharidini (Merck) 0|001
Alcohol ad solv.....1|0
Aq. destill ad.....100|0

Sig.—One teaspoonful three or four times daily. If no improvement be apparent in the first three or four days, discontinue.

Fifty-six cases of bladder disease, subdivided into 14 acute, 31 subacute, 10 chronic and one exaurbation of a chronic form, were treated with the above. Thirty-nine cases were of gonorrheal origin. In five cases no improvement was found, but four of these had resisted every other method of treatment. In 19 cases the improvement was slight or doubtful. The remaining 32 cases justified the assumption that cantharidin is a remedy which is worthy of a trial in all cases of gonorrheal cystitis, some cases of Dr. F. getting well in three days' time.

In the Therapeutische Wochenschrift I see a notice of the antiphthism of Dr. Denison, of Denver, Col. The editor speaks very favorably of it, but thinks the claims in its favor

are by no means entirely capable of demonstration.

The notice of the death of Professor Hoppeseyler recalls a personal incident.

When at the University of Strasburg I was looking around for a course on medical chemistry, and thought that in one announced by Professor Hoppeseyler I had found what I needed, so went to interview him.

Here a snag arose. Professor Hoppeseyler spoke no English and my German had not yet advanced beyond the "zwei bier" variety, but as the professor was to pocket sixty marks by the operation, he agreed to my struggles, and I went to work, as I thought, all right. The next morning Professor Hoppeseyler came into the laboratory and I showed him my results. If you ever saw a water bug under a tumbler you can imagine the way the old gentleman danced around. The language he used was fluent in the extreme. Unfortunately all I could understand was that he was mad; at what, I don't know to this day, so I packed up my duds and left, and then some kind student mixed my reagents so that Hoppeseyler should have a still more favorable recollection of me.

A friend of mine, who is high in the world of medicine and baseball in Louisville, Ky., and whose German was then a schweitzer kase, better than mine, went to the same professor, and during the whole first interview addressed him using the "du" form. Hoppeseyler stood it as long as he could, but finally interrupted him with an "excuse me, sir, but did you learn your German of a young lady?"

CHANDLER.

Therapeutics.

IN CHARGE OF

DR. LOUIS LEWIS, Philadelphia.

ANTIPYRETIC EFFECTS OF GUAIACOL EXTERNALLY APPLIED.

At the French Congress of Internal Medicine recently held at Bordeaux (Sem. Med., August 17), Lannois read, on behalf of Bard of Lyons, a paper on this subject, in which it was stated that the external application of guaiacol may be dangerous, first by the sudden fall of temperature which immediately follows the application, and, secondly, by the nervous depression produced by repeated applications. Bard distinguishes the antithermic effect, which is transitory, from the antipyretic effect, which is lasting. In typhoid fever the method should not be employed on account of the long duration of the disease; in erysipelas and in pneumonia, on the other hand, it is very useful. In tuberculosis its effect is favorable only in a certain number of cases of interstitial granular formations without complications such as suppuration, peripheral pneumonia, etc. Rondot (ibid) stated that, applied to the skin, guaiacol causes lowering of the temperature with profuse sweating, these two effects not always being of equal intensity. It sometimes happens that two or three hours after the temperature has begun to fall it rises again to a high level; this is a reactional pyrexia which must be taken into account. There are, indeed, cases in which the temperature, instead of going down, at once rises from one-half to one degree. Contrary to what is seen after the administration of other antipyretics, guaiacol causes polyuria. It is important to regulate the dose, as alarming hypothermia has been seen in some cases. A solution of 50 centigrammes of guaiacol in oil or glycerine should be employed. Applied to the skin the drug is useful in all febrile manifestations of tuberculosis. In fevers both in children and in adults it is sometimes very serviceable, especially in typhoid. The application should be accompanied by the administration of heart-tonics.

INTRAVENOUS INJECTIONS OF MERCURY.

Intravenous injections of sublimate, introduced by Bacelli and principally employed in the treatment of syphilis, has had different results in the hands of various ob-

servers. The general opinion is that they are efficacious, but opinions differ as to their inconvenience and the indications for their use. Gorl, in a recent article, gives a resume of the advantages and disadvantages of this method. The injections are painless, provided they are made in the lumen of the vessel. Pain at the moment of injection shows that the point of the needle is not free in the cavity of the vein. These injections enable us to incorporate precise and very small quantities of mercury, which will reassure timid patients and avoid intoxicating those with an idiosyncrasy. A third advantage is the rapidity of action, a fact of the greatest mportance in certain cases of cerebral or ocular syphilis. Lastly, Bacelli's method is not dangerous; at least no fatal cases have been reported yet; does not frighten the patients and does not cause any incapacity for work. On the other hand, they are impossible or very difficult in individuals in whom the subcutaneous veins are not visible, obese persons, for example. The principal objection is that their effects are of short duration. It is true that after warding off the most menacing symptoms of syphilis by these injections we may prolong the effect either by subcutaneous or intramuscular injections of insoluble mercurial salts, or by administering the metal in the form of inunctions or pills.—Jour. A. M. A.

BREWERS' YEAST IN DIABETES.

At the French Congress of Internal Medicine recently held at Bordeaux (Sem. Med., August 21) Cassaet stated that he had obtained good results in three cases of diabetes by the administration of brewers' yeast in a daily dose of 50 grammes, although the administration of the substance could not be continued sufficiently long on account of the practical difficulty in summer of preventing acetous or putrid fermentation. It was taken readily by the patients. The immediate effect was the expulsion, during the few minutes following its absorption, of a very large quantity of gas by eructation; then in the course of the first or second day extremely fetid diarrhea with abundant gas occurred. After a few days tolerance was established, and the patient felt better than he had done for a long time; his general state improved, his appetite returned, his strength increased, and pain diminished. The weight of the three patients in whom the treatment was tried increased three, five, and eight pounds respectively after the yeast had been administered for a fortnight. The gain in weight was particularly remarkable, inasmuch as one of them was phthisical as well as diabetic, and another had diabetes of the gravest type. On discontinuing the treatment loss of weight was soon observed again. As regards strength as tested by the dynamometer an improvement from 12 to 20 kilos was noted in the right hand, and of 17 to 22 in the left. As regards the urine the urea remained stationary or increased, and the proportion of sugar diminished, in one case by three-fourths, and in another by two-thirds in the fortnight.

CALF'S PANCREAS IN PANCREATIC DIABETES.

At the French Congress of Internal Medicine recently held at Bordeaux (Sem. Med., August 21), Ausset stated that he had given to dogs from which the pancreas had been completely extirpated—as proved by post-mortem examination—calf's pancreas lightly cooked and mixed with the animals' food. The glycosuria caused by the operation always disappeared as soon as the treatment was begun, and this effect lasted as long as the administration of pancreas was continued. The treatment was tried in a diabetic man passing 38 g. of sugar in the twenty-four hours, with more than double the normal elimination of chlorides and phosphates, loss of strength, etc. On the second day of the treatment the amount of sugar fell to 4 g. and the quantity of salts eliminated became normal. On the ninth day the sugar had wholly disappeared and the urine remained normal for more than a month.

A DANGEROUS POPULAR ANTISEPTIC.

Ledermann publishes, in the New York Medical Journal, an account of a case of diffuse external otitis, of an extremely severe and resistant type, due to taking a friend's advice and treating a slight itching of the ears with carbolic acid. The strength employed is not known. "Some pure carbolic acid was poured into a glass of water and syringed into the ears." Ocular symptoms and carboluria showed the systemic poisoning, and the patient was in great danger of atresia of one of her auditory canals.

The popular knowledge that carbolic acid is an antiseptic is productive of a great deal of harm. The fact that it was the first antiseptic employed by Sir Joseph Lister in wound treatment has been in many ways unfortunate for the human race. Surgeons have until recently regarded it as indispensable to have their instruments in a tray of carbolic solution, which, if strong enough to sterilize the instruments, destroyed the surgeon's hands for practical purposes and if, as was usually the case, it was so weak as not to actually burn the hands, did no good as an antiseptic—circumstances which were bad for the patient, the surgeon, and all concerned. The disadvantages of carbolic acid, however, can be best seen in outpatient clinics, whither patients continually come with the skin of their hands parboiled and peeling off, exposing the raw subcutaneous tissue, more or less eroded by the carbolic acid which a kind friend has advised them to use for a slight cut, or burn, or abrasion. The desirability of ascertaining the strength of what they are using does not occur to them. They are the victims of popular "Listerism" in its most primitive form. If the lay mind could only be made to appreciate that carbolic acid is always dangerous and seldom efficient as an antiseptic, a great deal of unnecessary suffering would be prevented.—Boston Medical and Surgical Journal.

Miscellany.

APHORISMS REGARDING EPISTAXIS.

1. The nasal hemorrhage which accompany eruptive fevers have no prognastic significance. At an advanced stage, however, they often indicate a malignant course.
2. Epistaxis in the second week of typhoid fever is of grave moment only in the adynamic forms.
3. Nasal hemorrhage, accompanied by petechie over the body, is much to be feared.
4. Repeated epistaxis in adolescents frequently indicates granulations.
5. It may be followed by anasarca.
6. It is necessary always to bear in mind the element of heredity.

A triumph in surgery is recorded in the case of a lady in Newark, N. J. Two years ago this young woman was completely scalped by a winding machine in a factory in Kearny. She was taken to St. Barnabas' Hospital, where Dr. Mercer undertook to furnish her with a new scalp and head of hair. After laboring patiently for two years he has succeeded. It is said to be the greatest case of successful skin grafting on record.

A SUPERNUMERARY BLADDER.

At the Academie de Medicine (Medical Press) M. Pean presented a young girl of fifteen who had not yet menstruated, and was affected from her birth with incontinence of urine. On examining her he found on the anterior wall of the vagina beyond the hymen, which was intact, a tumor of the size of a walnut; in pressing on it with the finger he perceived that urine oozed out, not through the orifice of the urethra, but through another orifice situated a quarter of an inch below it. In order to know if this tumor communicated with the bladder, and to determine the precise point of the communication, M. Pean closed the inferior orifice by simple pressure, and with another finger compressed

gently on the tumor. Under this experiment the contents flowed back into the bladder through a posterior and deep orifice. At that moment the patient felt a desire to micturate. The nature of the case was then plain; the patient had a double urethra and bladder. The speaker suggested the opening and the excision of the abnormal urethra and bladder, and, the parents consenting, the operation was performed. Immediately afterwards the incontinence ceased. M. Pean added, in concluding, that this example of a double urethra and bladder was unique in medical science.

DIAGNOSIS AND TREATMENT OF TUBERCULOSIS OF THE PROSTATE.

(Denos: Revue de Therapeutique Medico-Chirurgicale.)

The invasion of a blennorrhagic urethra by tubercle bacilli is quite common. When a bacteriological examination gives negative results and there is doubt as to the existence of tuberculosis, there are other means of making an early diagnosis. This can be done by an examination of the prostate. It is estimated that nearly one-third of the chronic blennorrhagic cases are affected by tuberculosis. The blennorrhagic prostate presents two principal forms: The first is characterized by a diffuse perineal sensation, by the expulsion of a whitish and sticky discharge at the moment of defecation; by the rectal touch one feels a general tumefaction, a large lump more or less flabby.

The second form is more frequent, but less well known, and rarely described. It gives rise to functional symptoms not well marked and generally confounded with urethritis; by the rectal touch one finds the gland little augmented in volume, sometimes very atrophied and sensitive on pressure. The surface is smooth in the centre, quite in contrast with the periphery, where there is constantly an induration and a protuberance marking the contour of the prostate. This is known as dry blennorrhagic prostatitis and is recognized by the chronic condition and the length of time required for a cure.

The tubercular prostatitis is accompanied more often by inflammation of the bladder. The points of induration disseminated irregularly, occupying especially the centre or upper border of the prostate, quite limited, clearly indurated, and does not give as distinct an aspect nor as angular an outline as dry blennorrhage prostatitis.

The general treatment for tuberculosis is instituted, creosote (2 to 4 gr. per day), administered especially by injections, has given excellent results to the author. As a local treatment it is the corrosive sublimate instillations which give the most success, beginning with a soluton of 1-2000 and increasing gradually until the strength of 1-500 can be used.

The administration of antiseptics by the rectum is useful; suppositories of iodoform or ichthyol with morphine and belladonna are often employed advantageously. If abscess form they must be opened and contents evacuated, and if fistulae exist, a perineal incision should be made, and followed by curetting, cauterizing and draining.

SALINE INFUSION IN CASES OF SUPPRESSION OF URINE AFTER SURGICAL OPERATION.

McBurney (Annals of Surgery, August, 1895) has reported to the New York Surgical Society a case of suppression of urine after operation for the removal of a large calculus from the right kidney, in which the patient, a man, aged 50, recovered after the injection into a vein of the arm of a quart of salt solution. The operation on the kidney was attended with but moderate bleeding, no ligature and no packing having been required for its control. In the course of the next twenty-four hours nausea began, and was soon followed by vomiting, headache, and symptoms of uremic posioning. There was no voluntary discharge of urine, and only four drachms were obtained by catheter during the first twenty-four hours after the operation. The

saline infusion was followed in the course of a few hours by the discharge of 34 ounces of urine, and the patient steadily recovered. In the discussion on this report reference was made to a case of total suppression of urine after an operation for gangrenous hernia, in which striking improvement had followed similar treatment. It was also pointed out that Dickinson had in the British Medical Journal called attention to the fact that patients could be aroused from diabetic coma in a few minutes by saline infusion.

RATIONAL DRESS FOR CYCLING LADIES.

The sensibilities of the Belgian police authorities are so shocked by the spectacle of women riding cycles in the divided skirt that they contemplate applying to them the law against the assumption of male dress by women. The medical profession has, thereupon, considered it necessary to enter its protest against such action by the police. They point out that for decades they have been inveighing against the use of tight corsets and heavy petticoats, and inculcating the use of garments which afford freedom to the female form, and now that fashion seems at last to run in favor of some rational modification, the authorities intervene to stop it. The doctors very reasonably maintain that nothing short of actual indecency would justify the police in interfering.—Med. Press.

HOW TO ALLAY THE PAIN OF BURNS.

The immediate relief of the pain of burns and scalds is a matter of much practical importance to the surgeon as well as to his patients. Constitutional shock is thereby lessened and one of the initial dangers of injuries of that class is avoided. The subject is one of widespread interest, and it is not altogether surprising to find the lay newspapers giving prominence to a means of stopping the pain of burns said to have been lately introduced with great success by a surgeon of the Charite Hospital in Paris. The remedy, with which many readers are already doubtless familiar, is a solution of picric acid. That it is an altogether harmless application, as claimed by the Parisian surgeon, is a statement open to some question. Picric acid is toxic to man as to the lower animals, and when given internally causes gastric disturbance, rapid wasting, and universal straining of tissues, without elevation of temperature. If, then, a solution of the acid were applied to a large raw surface resulting from a burn or scald, absorption of a dangerous amount might readily take place. As everyone knows the pain of such injuries may be readily controlled by other means. Perhaps the best known is a solution of bicarbonate of soda, a teaspoonful to the pint of water, which often acts like a charm. A weak solution of carbolic acid has an almost instantaneous action in controlling the terrible pain resulting from such wounds ,and a similar observation is true of various other antiseptics, among them preparations of Sanitas fluid and oil. There could hardly be any more practical application of science than the relief of a distressing symptom of this kind by the modern surgeon.—Med Press.

ANEMIC PATIENTS WHO HAVE MALARIAL CACHEXIA.

Dr. T. D. Crothers, editor of the Quarterly Journal of Inebriety, published under the auspices of the American Association for the Study and Cure of Inebriates, and who is an authority on neurosis, writes in his last number as follows: Antikamnia and quinine are put up in tablet form, each tablet containing two and one-half grains of antikamnia and two and one-half grains of quinine, and is the most satisfactory mode of exhibition. This combination is especially valuable in headache (hemicrania), and the neuralgias occuring in anemic patients who have malarial cachexia, and in a large number of affections more or less dependent upon this cachectic condition.

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SOME POINTS RELATING TO THE MEDICAL JURISPRUDENCE OF INSANITY.

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A product of mental disease is not a contract, a will or a crime, and the tests of mental disease are matters of fact, etc.; how then, is this question of insanity to be approached by a legal tribunal? What tests are to be applied for disease? What limits assigned, within which, extravagance of thought is to be pronounced compatible with mental health? Nor do I conceive that any tests, however elaborate, beyond the common and ordinary method of judging in such matters, would be competent to bear the strain of individual cases in the cause of experience. To say that the expert testifies to the tests of mental disease as a fact, and the judge declares the test of criminal responsibility as a rule of law, is only to state the dilemna in another form. For, if the alleged act of a defendant was the act of his mental disease, it was not, in law, his act, and he is no more responsible for it than he would be if it had been the act of his involuntary intoxication, or of any other person using the defendant's hand against his utmost resistance; if the defendant's knowledge is the test of responsibility in one of these cases, it is the test in all of them. If he does know the act is wrong, he is equally irresponsible, whether his will is overcome and his hand used by the irresistible power of his own mental disease, or by the irresistible power of another person. When disease is propelling, uncontrollable power, the man is as innocent as the weapon—the mental and moral elements are as guiltless as the material. If his mental, moral and bodily strength is subjugated and pressed to an involuntary serivce, it is immaterial whether it is done by his disease or by another man or a brute or any physical force of art or nature set in operation without any fault on his part. If a man knowing the difference between right and wrong, but deprived, by either of these agencies, of the power to choose between them is punished, he is punished for his inability to make the choice—is punished for incapacity; and that is the very thing for which the law says he shall not be punished. He might as well be punished for an incapacity to distinguish right from wrong as for an incapacity to resist a mental diesease which forces upon him its choice of the wrong. Whether it is a possible condition in nature for a man knowing the wrongfulness of an act to be rendered by mental disease incapable of choosing not to do it and of not doing it—and whether a defendant, in a particular instance, has been thus incapacitated—are ob-

viously questions of fact. But, whether they are questions of fact or of law, when an expert testifies that there may be such a condition, and, that, upon personal examination, he thinks the defendant is or was in such a condition that disease has overcome or suspended, or temporarily or permanently obliterated his capacity of choosing between a known right and a known wrong, and the Judge says that knowledge is the test of capacity, the Judge flatly contradicts the expert. Either the expert testifies to law or the Judge testifies to fact and from this dilemma the authoriculty is, that the courts have undertaken to declare that to be law which is a matter of fact.

The New Hampshire doctrine is followed in Illinois and Indiana. Hopps vs. People, 31 Ill., 385; Bradley vs. State, 31 Ind., 492 (1869); Stevens vs. State, 31 Ind., 483 (1869).

In North Carolina, in State vs. Haywood, Phill. (N. C), 376 (1887), the defendant having committed murder and his counsel defending him on the ground of insanity, the Judge instructed the jury that "if the prisoner, at the time he committed the homicide, was in a state to comprehend his relations to other persons, the nature of the act and its criminal character, or, in other words, if he was conscious of doing wrong at the time he committed the homicide, he is responsible. But, if on the contrary, the prisoner was under the visitation of God, and could not distinguish between good and evil, and did not know what he did, he is not guilty of any offense against the law, for guilt arises from the mind and wicked will." On the appeal this charge was commended as a model for other trial judges in the State to follow.

In Ohio, State vs. Gardiner, Wright 399 (1883), it was held that the same degree of insanity which excuses a man from his contracts, will exonerate him from accountability for crime. In the case of Loeffner vs. State, 10 Ohio St., 599, the Supreme Court laid it down that the test was whether the prisoner had sufficient reason and capacity to distinguish between right and wrong, and to understand the nature of his act, and his relation to the party injured. In the case of Farrar vs. State, 2 Ohio St., 70, the ability to distinguish between right and wrong was the test of insanity laid down by the Supreme Court. See also Clark's case, 12 Ohio, 494.

In Pennsylvania: In the case of Commonwealth vs. Harkin, 2 Pars. Sel., cas. 439; 2 Clark, 208, Judge Parsons charged the jury that "if he had reason and understanding so that he could judge between good and evil he is as much amenable to the criminal law as any other human being, etc." Other cases where the right and wrong test have been recognized in Pennsylvania are Commonwealth vs. Winnemore, Brewster 356, 1867; Commonwealth vs. Hart, 2 Brewster, 547 (1868); Commonwealth vs. Harkin, 2 Pars. 439; 2 Clark, 208 (1844); Commonwealth vs. Freth, 3 Phila. 105; 5 Clark, 455 (1858); Commonwealth vs. Mosler, 4 Pa. St. 264 (1846): In the Winnemore case, epilepsy evidently prompted the deed and the legal profession are referred to the late Dr. Ray's very valuable remarks on epilepsy and the legal liabilities of epileptics as contained in "Contributions to Mental Pathology," trial of Winnemore, p. 264, 1873: Little, Brown & Co. Because some epileptics have never committed any overt act and may have left a brilliant record, we must not forget that epileptics have an excessive susceptibility to nervous impressions which become distorted or changed on their way to the brain, and these distorted impressions may not infrequently prompt a criminal act. It is just as important for the legal profession to accept this scientific truth as it is for them to bear in mind that other no less important truth, that with women in the sexual evolution, in pregnancy, in childbirth, in lactation and at the climacteric period, strange thoughts, extraordinary feelings, unseasonable appetites and criminal impulses may haunt a mind at other times innocent and pure. Many cases of kleptomania, pyromania and of psycho-sensory insanity can thus be satisfactorily account-

ed for. There can be no Judge who in his heart does not believe in a true humanity enlightened by true science. In the case of State vs. Winter, tried at Easton, Pa., October 9, 1885, the indictment being for assault with intent to kill, Judge Howard J. Reeder charged the jury that "with regard to the alleged insanity of the prisoner, that if they believed the act in question was the product of mental disease, they should acquit. That a man may have monomania and commit acts unconnected with the delusions for which he is responsible. That if he was incapacitated by mental disease from distinguishing between right and wrong in regard to the particular act, he was irresponsible, etc." Judge Reeder in his charge virtually takes the broad and liberal ground that where there is loss of self-control caused by insanity, there is irresponsibility.

In Tennessee and Texas the right and wrong test is followed: Dore vs. State, 3 Heisk., 348 (1872); Stuart vs. State, 1 Baxt., 180 (1873); Thomas vs. State, 40 Tex. 60 (1874); Erwin vs. State, 10 Tex. (App.) 700 (1881); Clark vs. State, 8 Tex. (App.) 350; Williams vs. State, 7 Tex. (App.) 163, (1879).

In the United States Courts or Federal Courts, the right and wrong test is recognized. U. S. vs. Holmes, 1 Cliff., 98 (1858); U. S. vs. McGlue, 1 Curt., 1 (1851); United States vs. Guiteau (10 Fed. Rep. 161) 1881.

Respecting the acts and conduct, the following has been laid down: In considering the question of the sanity of a prisoner, the jury may properly be directed to consider his appearance, conduct and language prior to the time of the commission of the alleged crime. State vs. Mewherter (46 Iowa, 88).

In a criminal prosecution for the crime of murder, the witnesses for the accused may, under the plea of insanity, be permitted to give to the jury the acts, declarations, conversations and exclamations they saw, had with and heard the accused make at any time, shortly before, at the time of or after the killing. State vs. Hays (22 La. Ann. 39).

Where insanity is relied on as a defense to crime, evidence of acts and conduct of the prisoner subsequent to its commission is not admissible to prove his condition at the time of the offense, unless they are so connected with evidence of a previous state of mental disorder as to strengthen the presumption of its continuence at the time of the crime, or when they indicate permanent unsoundness, which must necessarily relate back. (117 Mass. 143) 1875, Com. vs. Pomeroy.

The prisoner's acts and conduct at times other than that at which the crime was committed are receivable in evidence. Com. vs. Pomeroy as above; State vs. Kelly, 57 N. H., 549 (1876); Guiteau case, 10 Fed. Rep., 161; State vs. Hays, 22 La. Ann., 39 (1870); U. S. vs. Holmes, 1 Cliff., 98 (1858). Where the sanity of a prisoner is at issue, a letter written by him prior to the commission of the alleged offense is admissible in evidence to throw light on the condition of his intellect at the time of the act charged. If destroyed, secondary evidence of its contents may be given. State vs. Kring, 64 Mo. 591 (1877), overruling on this point State vs. Kring, 1 Mo. (App.) 438 (1876). In Choice vs. State, 31 Ga., 424 (1860), it was held that the evidence of a conversation subsequent to the act charged was inadmissible to prove the defendant's insanity, and so are tests made by one not an expert at the time. In State vs. West, 1 Hurst. Cr., Cas. 371 (1873) in Delaware, a valueless collection of no possible interest, which the prisoner had made from time to time with the idea of starting a museum, was allowed, under the plea of insanity, to be produced and shown to the jury.

In Com. vs. Wilson, 1 Gray, 337, where the defense was that the homicide charged had been committed by the prisoner under the insane delusion that the deceased and others were engaged in a conspiracy against him, expressions of hostile feelings toward the prisoner made by the deceased, though not shown to have been made in the defendant's presence, nor to have come to his knowledge, were held admissible for the

purpose of showing the state of mind of the deceased toward the prisoner at the time, and this tendency to show some real ground for the prisoner's feeling toward the deceased. In Coles trial, 7 Abb. Pr. (N. S.) 321 (1858), it was held that preparations made by a person to commit the crime are relevant on the question of sanity and premeditation.

Respecting the burden of proof, we think as was decided in case of Com. vs. Rogers (7 Metc. 500; 1 Bennett and Heard's leading cas. Crim. Law, 95), that a jury may find a person insane where a fair preponderance of the evidence is in favor of his insanity; (also, Coyle vs. Commonwealth, 100 Pa. St. 573). In this case it was also properly decided that where the delusion of a person is such that he has a real and firm belief of the existence of a fact which is wholly imaginary, and under that insane belief he does an act which would be justifiable if such fact existed, he is not responsible for such act. It was also held in this case that capacity and reason sufficient to enable one to distinguish between right and wrong and understand the nature, character and consequences of his act, with mental power sufficient to apply that knowledge to his case, furnish the legal test of sanity. The last qualifying clause—"with mental power sufficient, etc."—is a very important one, as many of the insane perfectly understand the difference between right and wrong but there is the loss of self control produced by disease and not mental power enough to make them apply the knowledge of right and wrong to their own case.

Respecting degrees of crime. In Anderson vs. State (43 Com. 514; 21 Am. Rep. 669), it was held that though a total want of responsibility on account of insanity be not shown, yet if the prisoner's mind was so far impaired as to render him incapable of a deliberate, premeditated murder, he should be convicted only of murder in the second degree. It was also held in this case that moral mania, i. e. the derangement of the moral faculties, (Reasoning Mania), where it is proved to exist, should be considered by the jury in determining the degree of crime. It was also held in this trial that when a new trial is asked for after conviction on the ground of newly discovered evidence of insanity it should be granted

With respect to drunkenness: If a person while sane and responsible, makes himself intoxicated, and while intoxicated, commits murder by reason of insanity, which was one of the consequences of intoxication, and one of the attendants on that state, he is responsible. (United States vs. McGlue, 1 Curt. 1., 1851. Voluntary drunkenness is no excuse for crime; but insanity produced by continued intoxication is. Bradley vs. State (Ind.) p. 115.

Where a person is insane at the time he commits a murder he is not punishable as a murderer, although such insanity be remotely occasioned by undue indulgence in spirituous liquors. But it is otherwise, if he be at the tme intoxicated, and his insanity be directly caused by the immediate influence of such liquors. U. S. vs. Drew, 5 Mason, 28.)

In the case of People vs. Rogers (18 N. Y., 9), it was held that voluntary intoxication is no excuse for crime. Also that insanity resulting from habits of intemperance and not directly from the immediate influence of intoxicating liquors may amount to a defense to crime.

It must be borne in mind that all alienists of experience place dipsomania under the head of periodical insanity, and do not consider it as voluntary intoxication at all, but involuntary.

In a case of dipsomania the craving for drink which appears periodically is as irresistible to the subject of the disease as the attack of mania is to the subject of recurrent mania and it is just as proper to punish the one as the other, for overt acts committed during the paroxysm. The public are very prone to believe that because a man or woman goes two or three months without drinking and then suddenly plunges into a wild debauch lasting ten days or a fortnight, that he is morally responsible, but if a physi-

cian of experience in the disease of inebriety be summoned by the Court he will easily decide whether the case be one of dipsomania or of voluntary intoxication.

Respecting kleptomania, on a trial for theft, the defense being the propensity to steal known as kleptomania, and there being evidence tending to sustain it, the Court should charge the jury specifically on this point. A submission of the usual test of the prisoner's ability to distinguish between right and wrong is insufficient. (Looney vs. State, 10 Tex. (App. 520). Judge Wnikler, of the Court of Appeals, held that the trial judge should have charged the jury that kleptomania is a recognized symptom of insanity.

Respecting imbecility, an imbecile ought not to be held responsible criminally unless of capacity of ordinary children under 14 years of age, i. e. children of humble life and of only ordinary training. State vs. Richards (39 Com. 591).

Respecting the effects of the opium habit on the mind, in Rogers vs. State, 33 Ind., 543 (1870), the defendant sought to show the effect of such deprivation on his mental condition, but the trial judge refused to allow him. On appeal this ruling was reversed. "We think," said the Supreme Court, "the evidence was competent, as tending to show whether or not he was or not at the time in a condition mentally such as to be able to commit a larceny." From a somewhat extended experience in the treatment of opium cases it is our opinion, that there is a modified responsibility in many of these cases. The moral senses seem to be affected in the opium habit in many cases, and a psycho-sensory insanity induced.

Respecting insane or uncontrollable impulse. If an insane impulse leads to the commission of a crime, the actor is not responsible. An instruction that "if the jury believe that the defendant knew the difference between right and wrong in respect to the act in question; if he was conscious that such act was one which he ought not to do, he was responsible for his act" is erroneous. (Stevens vs. State, 31 Ind., 485) 1869.

If a person commits a homicide, knowing it to be wrong, but driven to it by an uncontrollable and irresistible impulse arising not from natural passion, but from an insane condition of the mind, he is not criminally responsble. (State vs. Felter, 25 Iowa, 67), 1868.

Respecting the opinions of persons not experts. A witness not an expert may give his opinion of a person's insanity if accompanied with the facts on which it is based. (State vs. Erb, 74 Mo. 199), 1887.

The opinions of an ordinary witness as to a prisoner's insanity are inadmissible. (State vs. Brinyea. 51 Ala., 241), 1843.

Opinions of witnesses as to the prisoner's insanity are admissible. (12 Mo. 223). Unprofessional witnesses may be asked, after giving the circumstances and conduct of the party, to state their opinion as to his sanity; and the exclusion of such evidence offered by a defendant is error. (Dove vs. State, 3 Heisk, 348) Tenn. Jan. 1872.

The opinions of persons not experts as to the sanity of the prisoner are admissible, if accompanied by the fact upon which they are founded. (Choice vs. State, 31 Ga., 424.) 1860.

The opinions of the family physician and of those who were in daily contact with a person who has committed an overt act, ought to be received in cases where insanity is alleged, as they are often the persons best qualified to judge of the general condition of the person for days, weeks or months prior to the commission of an overt act.

Respecting insanity in relatives. In nearly every State it is held that on the question of the prisoner's insanity it is right and proper to permit an inquiry into the mental condition of any of his immedate relatives, and this should never be lost sight of by the counsel, as it is a very important point. State vs. Felter, 25 Iowa, 67; Bradley vs. State, 31 Ind., 492; U. S. vs. Guiteau, 10 Fed. Rep., 161; Baldwin vs. State, 12 Mo. 223; People vs. Garbutt, 17 Mich. 9; Hagan vs. State 5 Baxt. 615, Tenn.

A PRACTICAL STUDY OF THE BLOOD AND THE CIRCULATION, WITH A HISTORICAL REVIEW OF THE SUBJECT AND ITS BRIEF CONSIDERATION FROM THE STANDPOINT OF ITS CLINICAL COMPOSITION, ANATOMICAL STRUCTURE, AND PHYSIOLOGY; INCLUDING CLINICAL STUDIES, AND EXPERIMENTAL RESEARCH ON THE LOWER ANIMAL.

BY THOMAS H. MANLEY, M. D.,
NEW YORK.

Continued from last number.

Part II.

HISTORICAL INCIDENTS AND VIEWS OF THE EARLY WRITERS ON THE CIRCULATION.

We are informed by historians and those familiar with the literature of antiquity, that the period represented by the times of Aristotle marked the dawn of the physical sciences.

Aristotle himself the son of a physician was among the first to seriously engage in a study of the circulation; utilizing for this purpose, we are informed, the lower animal

But as his researches were but disconnected and fragmentary they tended to throw but little light on the mechanism of the circulatory system, the mysteries of which, were only unfolded more than two thousand years later, by a son of Albion.

Praxogras was the first to make a distinction between the veins and arteries. This was 400 years before the birth of Christ (Obs. Comp. D' Hippocrate, t. p. 214). His most important innovation related to the structure of the arteries; though in function he believed they served the purpose of conveying gas; which is strictly true, as ogygen gas is diffused through the system in a soluble state, through a fluid medium.

In the Alexandrian School, which was at the zenith of its fame, about two hundred years before the Christian era, we notice the names of those celebrated anatomists, Herophillies and Erisistratus; and in this famous centre of medical learning Dalton informs us dissection was permitted by decree of state. From the pens of the above named teachers we first secure a clear and accurate description of the valves of the heart; but with steadfast and loyal allegiance, to the dominating views of their time, they insisted that they only contained blood, and the arteries, air.

The greatest move forward, on correct lines, came with the advent of Galen, who came to Rome, in the second century, A. D. Until his time, the arteries were supposed to contain and carry spirits only; or pneuma. But, by patient and long continued dissection, combined with painstaking observing on the lower animal, he was at last convinced that the arteries were bearers of blood, that they were destitute of valves and possessed great strength and power.

The advent of this mighty genius opened the way for his successors and definitely established certain factors soon to crystallize into impregnable principles.

Galen, as the physician of the royal family, was the leading physician of the first city of the world, and was regarded as the greatest living authority; and, we are informed, for more than a thousand years his anatomical precepts and descriptions were taught, unaltered in all the great medical centres of Europe. In his teaching he insisted on the importance of correctly interpreting visible phenomena. He repeatedly demonstrated, that when an artery was cut, large or small, it always gives issue to blood. He would expose a large artery; as the femoral or brachial; ligate it in two places, and then show the constricted section distended with blood. He made repeated and conclusive demonstrations in this feature of the circulation and in this manner wrought an unparalleled revolution in physiology, with a corresponding upheaval in the more ancient views, which made their impress, through their practical or clinical bearing of the subject. It was he, too, who discussed and proved inter-dependence be-

tween the heart and pulmonary organs. According to his notion, the lungs served to maintain animal heat, and to ventilate and cool the blood. Galen went so far ahead of his time as to venture the assumption that the terminal arteries and veins in the periphery anastomosed throughout the whole body, by which their elements blended.

Thus we see an important doctrine practically established, fifteen centuries before with the microscope and fine stained injections, we were enabled to give a visible demonstration of it.

At the University of Bologna, in the twelfth century, Modoni first published a work on anatomy, which embraced a history of the valves of the heart, with the movements of the auricles and ventricles.

For the next succeeding two centuries, viz.: to the sixteenth century, the brilliant and celebrated Versalius appeared; the first, it is said, who even taught anatomy as a science. He was a scientific investigator of the highest order, and in 1657 we find him teaching anatomy in the far-famed University of Padua. At a great risk of unpopularity he took issue with Galen's teachings. He taught that the venous blood was formed in the liver, from the chylous juices, brought there by the portal veins—a doctrine by no means far out of the way—this, in time furnishing nourishing material for the sustenance of the tissues. To dwell at length on the extensive advances made by Versalius, or attempt to incorporate those most suggestive of the great discovery so near at hand, would occupy more space than is here permitted. It is enough to say that his writings clearly foreshadow how close he approached the portal of complete discovery; though in the fullness of his powers and scarcely at the meridan of life, in obedience to royal command, he ceased to teach and repaired the Madrid, as the household physician to the royal family.

After Versailius came the erratic, though remarkable character, Michael Servetus, who was burned at the stake, by order of Calvin, in Geneva.

His writings dealt rather with ecclesiastical subjects. To him, without question, nevertheless, we owe the discovery of the pulmonary circulation. He denied that the blood filtered through the septum from right to the left ventricle. Ambrose Pare, in his Anatomie-Universale, gives to Columbo the credit of having discovered a new route for the blood through the lungs, where it is mixed with "vital spirits," to return by the "arteria-venosa."

Strange to say, Fallopius, a contemporary of Columbo at Padua, in his works makes no mention of the circulation at all. Fabricius Hilandus in the latter part of the sixteenth century made further studies on the valves of the veins; but with this exception we note nothing of importance further revealed till the time of William Harvey, whose advent came just fifteen centuries after Galen. Harvey had come fresh from the hands of Fabricus; had imbibed a spirit for research from that noted centre of anatomical learning, the University of Padua, and in London, at the age of 38 years, we find him commencing a course of lectures on the circulation, and announcing to the professional world his great discovery. This was in 1616.

At the end of nine years his treatise appeared. He had made repeated demonstrations on the living animal, before students and physicians, who came from every quarter of the globe to witness the marvelous spectacle. This epoch marks the turning point in medical science, for never before in history did any scientific discovery work so profound a revolution. It is most remarkable to relate, however, that Harvey denied the anastomosis between the arteries and veins.

Marcelli Malpighi was the first to prove by visible demonstration the circulation in the capillaries, and discovered the red blood globules, in 1661. He utilized the frog for this purpose, exposing the lungs. In 1773, 115 years later, Hewson discovered the white corpuscle. In 1684 Dr. William Molyneau, a member of the Dublin Royal Society, first demonstrated the circulation in the liv-

ing animal, under the eye, using therefor the water-newt; as he puts it, he saw the blood flowing "as plainly as water running through a sieve."

In 1690 Leanwenoch witnessed the moving, red corpuscle in the tadpole It is singularly strange, as Norris has pointed out, that "although it is more than 230 years since the red corpuscle was discovered, and 120 years since the white was, we are yet in profound ignorance of either their precise origin, or mode of developement."

We here have briefly outlined a few items of historical interest in connection with our subject. They possess high value from other considerations; as indicating to us how slow the wheels of progress moved in the past, and how many centuries it required to demonstrate one of the simplest systems in the body, from a mechanical standpoint.

It further serves as an incentive to us, in our time, to press on and not despair; if we do not attain to the goal of entire success in our life-time, we may leave on record whatever we may be able to advance of our knowledge on this fascinating subject of the blood and the circulation.

Having briefly touched on the historical side of our subject, our next topic will have reference to the physico-dynamics and vital phenomena concerned in the moving the blood-current. The prevailing impression that the blood moves in obedience to physical laws alone, in the present state of our knowledge, must be disputed; and modern teachers have worked incalculable harm in some instance by striving to impress on the student that the heart is an organ, similar to an engine, moving entirely in obedience to mechanical laws, and that the course and finer movement of the general blood-current and hematic elements are wholly dependents on it.

(To be Continued.)

Literature.—Dalton. History of the Circulation.
—Galen. Mem.
—A. Pare. Recherches Du Sang.
—A. Versalins. Anatom. Nat.
—Avergena Malad. Du Sang.

THE TURKISH BATH.

BY LOUIS LEWIS, M. D., PHILADELPHIA.

Whoever indulges in a Turkish bath for the first time will be astounded at the vast amount of dead tissues and used-up bodily products that are expressed from his skin by the combined action of the hot air and massage. Countless rolls of effete material, that cannot be removed through the medium of ordinary perspiration, make their exit through the surface, by channels that were previously blocked and impervious. Simple perspiration—the first effect of the hot-air bath—acts on the smaller sweat-glands, and sets free the water, carbonic acid, and more or less nitrogen; but the larger sweat-glands, which are situated in the fatty tissues beneath the true skin, and contain the solid constituents lactates acetates, lime-salts, chloride of sodium, besides various extraneous matters present under unhealthly conditions are only acted on by the addition of scientific hand-kneading. The retention of these extraneous matters, urea, uric acid, acetone, bile-products, etc., leads to toxemic headaches, erythematous swellings, rheumatism, gout and jaundice. Another system of glands, the sebaceous or oil-glands, are also apt to become blocked; and their imprisoned tallowy contents, olein, stearin, palmitin, give rise to unslightly varities of acne on the face, chest and shoulders. But these glands are nearer the surface than the sweat-glands, and thus are more readily relieved of their contents. The sweat-glands also contain some fatty matter, similar to, but not identical with the contents of the sebaceous glands. The exit of sweat results partly from increased blood-supply, but more from reflex action in the sweat-centres, kindled through the medium of the nerve fibres.

No sensible person can doubt the expediency of ousting all these intruders from the system, by a method so agreeable and effectual as the Turkish bath. Then comes a sensation of relief from some indefinable

general obstruction, as though one were actually breathing through every portion of the body, and a feeling of buoyancy only comparable to "walking on air." A little muscular languor may remain, which, however, is not fatigue, yet invites one to indolent repose on a couch provided for the purpose; and after a short dreamy period, devoted to "thinking of nothing at all," (like the jolly young waterman) one rises as a "giant refreshed."

Numerous minor ailments and functional disorders are removed or ameliorated by the Turkish bath. The expectoration, hoarseness and oppression of breathing, attendant on "taking cold," are speedily relieved, also the lassitude and aching of limbs. In febrile conditions, it is necessary to restore the balance between oxidation and nutrition, or in other words, between the production of heat and its consumption; here the bath affords a rational remedy, by reducing and regulating the temperature. Heat is a source of motion in the animal body, and must not be unnecessarily wasted. Residents of cities, who lead sedentary lives, and take insufficient exercise in proportion to a free mode of living, are liable to a general plethoric condition, marked by a coated tongue, florid face, suffused eyes and bounding pulse; or the blood itself may be tainted with retained excrementitious material, as signalized by a moist tongue, pallid face, sallow skin, and depraved secretions. A regular use of the Turkish bath will go far to control the blood-supply, and, by removing the offending matter, restore the various organs to their normal state. The bath is very useful in neurasthenia, with a dry tongue, wayward appetite, disordered vision, tinnitus aurium, and headache; and in vertigo, even when the dizziness affects the gait, and causes a dread of walking alone. The bath tranquillizes the vital condition of all the nervous centres. Many persons are worried by morbid "thick-coming fancies" that trouble the brain and weigh upon the heart; these are commonly called "a fit of the blues" or "the vapours," and they are quickly exorcised by the Turkish bath. Chronic sleeplessness, whether due to rheumatic, gouty or dyspeptic disorders, yields to a course of baths, through the depurative effect of free transpiration and the functional activity that is awakened by the massage. Headaches of nervous and congestive origin and those due to the toxemic influence of urea, bile, alcohol, and malaria, succumb to this agent, when timely employed. Spinal irritation, rheumatism, lumbago, and sciatica, asthma, chronic bronchitis, and winter cough, irregular work of the kidneys and liver, are all alleviated by hot air and massage. Eczema, psoriasis, urticaria, prurigo, and other skin diseases are benefited; but for obvious reasons these are unsuited for treatment in public establishments. In fine, in any of the other conditions alluded to and in many functional disturbances outside of organic change, I would say to the patient,' without discrimination seriously and literally, "Go to Bath," and let it be a Turkish one.

2011 Arch street.

THE NERVE THEORY OF MENSTRUATION.

Christopher Martin, in a well-studied paper, concludes as follows: 1. Menstruation is a process directly controlled by a special nerve-centre. 2. That this centre is situated in the lumbar part of the spinal cord. 3. That the changes in the uterine mucosa during the period are brought about by catabolic nerves, and during the interval by anabolic nerves. 4. That the menstrual impulses reach the uterus either through the pelvic splanchnics or the ovarian plexus—possibly both. 5. That removal of the uterine appendages arrests menstruation by severing the menstrual nerves.—Montreal Medical Journal.

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PHILADELPHIA, SEPTEMBER 28, 1895.

REOPENING OF THE MEDICAL COLLEGES.

After an interval of four or five months' vacation, all our medical colleges again throw open their doors to welcome back their former students and those who have decided to take up medicine as a calling and enter for their first time.

Within the past twenty years vast changes have taken place, and a revolution has been wrought, the effects of which will soon be made more obvious than they are at the present time. Until a comparatively recent date the tide of students eastward from the new States and Territories was a large one; and, while some of those who came with it were gentlemen of high scholarly attainments, the majority were fresh from the cattle ranch, the farm or the shop, with little or no learning. The teaching faculties cared little provided they brought their cash along with them. It may be said without any exaggeration, that until 1880 one could secure a diploma in nearly any medical college without being able to do more than write his own name. He was given qualification with elaborate parchment, with stately latin text, of which he was as innocent as the new-born babe. It was set forth that he was fully qualified, etc., when, as a matter of fact, in many instances, he had never seen even a simple case of labor, and of practical medicine or surgery he knew absolutely nothing. Those were palmy days for our medical colleges, as their stocks yielded better than a gold mine.

Happily, now all this is changed. With few exceptions, every State has its own well-equipped medical college and faculty for thorough teaching. A preliminary, general education, equivalent to the English standard, is demanded, and nothing less than a four years' course is required in all but a few unimportant instances

The British provinces, which were large feeders to the Eastern colleges, have raised a barrier against their students coming into the States by raising their standard, so that now it has practically come to pass that each college must chiefly depend on material from its own State. This is as it should be, for there is no good reason why small teaching faculties should not be as capable to train students for the battle of life and for advanced knowledge in medicine as those of mammoth proportions; and, as a matter of fact, many of our most eminent practitioners are graduates of schools little known beyond their own States. With those who intend to study special branches, or qualify as consultants, then, for post graduate instruction, it becomes necessary to visit the great metropolian centres of America and Europe. We cannot

indorse the views of a distinguished physician, who was the orator at one of our large annual meetings, who declared we had altogether too many medical colleges, and that instead of organizing weaklings "we should make the strong stronger." We have all along contended that what we need is not so much larger colleges, as better ones. There is no reason why we should not double their number, taking only the precaution to insist on a high standard for admission and State examinations.

Those colleges which boast of classes from four to eight hundred cannot possibly do justice to each individual student After all, the college does not make the man; he must make himself.

The career of medicine offers as many inducements now as it ever did, though those who take it up with a view of a secure and easy living, without incessant toil, the expenditure of enough capital to start on a moderate scale in many lines of trade, a large sacrifice of time in preparation and delay in securing a living income, will be certainly disappointed.

We have a more intelligent public to deal with now; proprietary nostrums and homeopathic remedies are largely purchased by those who dabble in domestic medicine; cheap transportation for dispensaries, club doctors, etc., all combine to make it more and more difficult to eke out a living in the practice of medicine.

NEW SURGICAL AMPHITHEATRE IN PHILADELPHIA.

Plans are now being prepared for the erection at the Medico-Chirurgical Hospital of one of the finest surgical amphitheatres of the world. It will probably be completed next spring, so that it will be in readiness for the summer lectures. Dr. William Easterly Ashton, professor of gynaecology, and Dr. James M. Anders, professor of the practice of medicine, who have just returned from Europe, went abroad to look at the amphitheatres of the Old World and get any ideas that may be of service in the construction of the amphitheatre for the hospital.

The amphitheatre will cost about $100,000 and will be built to accommodate 600 students.

The hospital owns six buildings on Eighteenth street above Cherry. The rear of these buildings will be torn down and the amphitheatre will be constructed in the space intervening between the hospital building and the main parts of the houses. It will be of Pompeiian brick and iron, and will also be fireproof. It will connect with the Maternity Hospital and also with the main hospital building by bridges, so that patients can be taken to and from the clinics in the most expeditious manner.

Around the new amphitheatre of the hospital will be rooms for Dr. Laplace, Dr. L. Webster Fox and Dr. Ashton. In addition there will be an apartment for the medicine department. Last year 24,391 patients were treated in the clinics and the surgical amphitheatre is needed. There is also in contemplation a bacteriological and pathological laboratory. This branch of medical science is playing such an important role that it is considered by advanced physicians as one of the most necessary features of the curriculum.

The outlook for the Medico-Chirurgical College this year is most flattering. It is expected that there will be between 350 and 400 students.

A DOCTOR SUED FOR FORTY THOUSAND DOLLARS

By a Vender of Eye-Glasses and the New York County Medical Society Refuses to Share the Responsibility of Its Member.

Dr. Frank Van Fleet, of New York, during the past winter in an essay before the New York County Medical Society, called into question the propriety of allowing a lay firm to further advertise in the Medical Directory of the society, as their methods were irregular, inasmuch as they claimed to have "superior methods for the detection, treatment, etc., of ocular defects."

In consequence of the criticisms which Dr. Van Fleet had made,

which were taken and spread broadcast through the press, to whom they were given by a reporter present, this firm has sued the doctor for $40,000.

The doctor's defense is that what he submitted was in the nature of a privileged communication that the society unanimously supported his conclusions, which were intended in the interests of the whole profession and the public, and, therefore, the society should now come to his rescue when he has been set on by a body of sagacious quacks. But note the attitude of the society, which should now raise its aegis and give battle to those who would mulct a member for the performance of a duty which he owed the community and his profession as well. The Comitia-Minora—the executive body of the society—deny that the society is in any way responsible for the opinions of its members, and refuses to extend the doctor any support.

This is most unfortunate, and will be certain to work incalculable harm on legitimate medicine in the future. Why, indeed, should one join a medical society at all if not with a view of securing its support in the resistance of oppression, imposition or extortion? Truly, all cannot be authors, writers or college professors; many are too busy to attend the meetings; but all expect and are entitled to the united support of their medical organization in the event of persecution.

Dr. Van Fleet is a well-known opthalmic surgeon, and of late has done noble yeoman work in the tearing out from the roots that cursed upas tree, the free hospital and dispensary, and deserves not only the entire sympathy, but the generous and undivided assistance of those who would raise the profession of medicine to a level something higher than a trade. It will be remembered that the County Medical Society of New York has repudiated the code; therefore, every man is practically a law unto himself. We have always professed to a view that the less laws the better; though, unhappily, we are more and more impressed from our daily observations that the millennium has not yet arrived, and there are many yet who to hold in line need the firm grip of a stiff curb to restrain their drifting tendencies.

One loses his patience with those commencement orators, with their cant and flummery about the sacred calling and noble profession of medicine, when some of those loudest shouters are the very first to ignore a brother practitioner when he most needs their help

It is most certainly to be hoped that at least for the reputation and fair name of the New York County Medical Society, which has had on its rolls and has to-day many of the most eminent in the American profession, it will reconsider its action, and come out, sans peur, in defense of a member, the victim of a persecution, who, like Dr. Reeves only performed his duty to his profession.

Book Reviews.

HERM. KUEMMELL, DIE OPERATIVE HEILUNG DER PROSTATA-HYPERTROPHIC. H. Kornfeld, editor, Berlin.

The author begins with the description of the anatomical relations of hypertrophied prostate, and then discusses the theories of its etiology especially as to wether it be primary or secondary in its origin.

The first half of the book is composed of full descriptions and reports of prostatectomy and catheter-shaped instruments, of a discussion of the galvano-caustic treatment of Bottini, which the author thinks very favorably of.

External prostatectomy, by Garley's method is considered of but little value. Dittle's operation and the complete exterpation of the hypertrophied prostate are treated of at some length.

The second and more important part of the work is devoted to castration.

After touching on the fact that post-mortems upon subjects affected with congenital or acquired loss of the testicles had demonstrated that atrophy was invariably present,

Knemwell brings forward 52 cases of operations, collected from all sources.

Of these, one patient lived without improvement, three died, and the other 48 improved rapidly in health and condition.

Castration for the cure of prostatic hypertrophy has doubtless the great advantages of technical simplicity and freedom from danger, for it can, if necessary, be performed with merely local anaesthesia, and the patient may be confined to his bed but a comparatively short time.

The work has been elaborated with true German thoroughness and will well repay a perusal.

STUDIO ETIOLOGICO SULLE INFEZIONI DELLE VIE URIUAIRE. Par Dottor Bastianelli, Universita Di Roma.

The author of this excellent monograph is one of the best known and most distinguished, among the younger generation of surgeons in Italy. Not many years since he visited the United States to study in our hospitals those subjects cognate to the science and art of surgery and gynaecology. Previously he had made a long sojourn in England, where he was successively the private student of Lawson Tait. Spenser Wells and Sir Joseph Lister. He finally went to Paris, and there, under Pean and other equally eminent surgeons, finished his preparation for entrance into the field of surgery. The study which his latest contribution to surgical science embraces is just now one of the most important character, as it opens to us the new fields and promises in the near future to wholly revolutionize our present system of therapy.

Dr. Bastianelli has, indeed, placed the whole profession in his debt, for the magnificient, exhaustive and complete exposition which his essay contains on the infection of the urinary passages by pathogenic bacteria. His work most clearly illustrates the full scientific detail which must now, in our time, be observed in diagnosis of infectious diseases, along the genito-urinary track.

He gives us, at length, the views and conclusions of the best known authorities in Europe and America on the subject of the morphological element in urethral infection, besides states in full detail his own mode of procedure in dealing with this class of cases. Not only is he not satisfied with an examination of the urine in a cursory way, but he always insists the microscopical, staining, culture and inoculative test, in all cases of questionable etiological origin. It may be said with all truth and sincerity that this valuable monograph is well up with the last on the subject it considers and is the most valuable by far from a scientific standpoint that has yet been produced in Europe.

Electro-Therapeutics.

IN CHARGE OF

DR. S. H. MONELL, New York.

ELECTROLYSIS BY A CURRENT CONTROLLER FOR THE REDUCTION OF SPURS OF THE NASAL SEPTUM.*

BY. W. E. CASSELBERRY, M. D.
From the N. Y. Med. Journal.

Customarily spurs or excrescences of the nasal septum are removed by surgical means by the knife, saw, and drill, and I wish to disclaim now, as I did in a recent preliminary report on the same subject, any idea of indorsing electrolysis as a universal substitute for the surgical method, for the latter, in skillful hands, is more rapid, more precise, and in the case of bony spurs certainly more effective than is electrolysis. Certain European operators have advocated the method by electrolysis; a few have praised it with perhaps a degree of extravagance, and yet it would seem that a modicum of actual fact must underlie so much enthusiasm.

My own experiments have been undertaken to determine the scope, or, better stated, the exact limitations of this method—in what class of cases it is possible by means of it

to avoid a more or less sanguinary operation, and to what extent one can utilize it to reduce spurs and thickened areas of minor degree, those which are scarcely deserving of surgical treatment with its possibilities of troublesome hemorrhage, but which one would like to see resolved for the sake of the additional nasal space and better drainage which would thereby accrue to the patient.

A resume of the previous literature of the application of electrolysis to the treatment of nasal spurs need be but brief. Miot, of Paris, was the originator in 1888, and following him Garel, of Lyons, reported his results in thirty cases; but my attention was first drawn to the method by Moure at the Ninth International Medical Congress at Berlin in 1890, where he read an elaborate paper on the subject and described minutely the technique. Moure and Berbonie have since embodied their studies in a monograph, published in Paris in 1892, and Moure again in 1894, before the Eleventh International Medical Congress at Rome, discussed in a paper the comparison between electrolysis and other methods of treatment for the destruction of deviations and spurs of the nasal Septum. Moritz Schmidt, in his book (Die Krankheiten der oberen Luftwege), published in 1894, confirms the efficacy of the method as advanced by the French operators, a significant fact which tends to remove the sense of skepticism with which the subject was first viewed in America.

Among others may be mentioned Peyrissac, Meyer, and Heryng, all cited by Newcomb.

Only two papers by American authors have come under my observation; one by Newcomb, of New York, with a report of two cases and an excellent review of the bibliography and technique, and the other by Ballenger, of Chicago, with a report of three cases.

All of these operators have employed as the source of the electricity a primary galvanic battery of about thirty cells. The inconveniences of this apparatus, and especially its unreliability when called into use only at irregular and prolonged intervals, has deterred many from trying the electrolytic method. I have sought to avoid these annoyances by adapting the Edison electric light circuit to the purpose by means of lamp resistance and the McIntosh current controller. The controller, together with a milliamperemeter, cords, and needles, is contained in a small drawer within easy reach as one sits in position for the treatment of patients, and is always ready for immediate use without waste or corrosion. It is as easily and readily applied as the galvano-cautery, except for the few minutes' additional time that its energy needs to accomplish the work. When used it is necessary only to pull out the drawer, adjust the milliamperemetre, and insert the needles.

The current strength necessary for electrolysis of nasal spurs is from fifteen to forty milliamperes, measured with the resistance of the spur in the circuit, and, to supply this current, from fifteen to thirty cells of a galvanic battery would ordinarily be used with a corresponding electro-motive force of from twelve to twenty volts or more. A current suitable for electrolysis should be characterized by moderately high tension or voltage and comparatively low current strength or amperage.

The Chicago Edison current has an electro-motive force of one hundred and ten volts, which must be reduced by the current controller. The amperage, of course, depends on the amount of resistance in the circuit, but it also can be correspondingly reduced by the resistance of lamps and the controller so that with the spur in the circuit it measures the requisite number of milliamperes.

The current controller was described at length in my preliminary report. It will suffice now to say that it is composed of a number of resistance coils of varying size, arranged in two rows, with sliding contacts to each, so that the patient may be placed in a shunt circuit to one or more coils. The coils on the left divide the electro-motive force into tenths, and its contacts I have

named the decimal slide, while the coils on the right divide the electromotive force into hundredths, named in consequence the centesimal slide. Thus, if placed in direct connection with the one-hundred-and-ten-volt Edison circuit, and the decimal slide be advanced to 1, enough coil resistance is removed to secure a current intensity of one-tenth of a hundred and ten volts, equal to eleven volts. In like manner, if advanced to 2, two-tenths of a hundred and ten volts is secured, equal to twenty-two volts. If now the centesimal slide be advanced to any given contact, say 4, there will be added four hundredths of a hundred and ten volts, or four volts, equal now to twenty-six volts.

But the decimal division of an initial one-hundred-and-ten-volt circuit is still too painful to the patient on advancing the contacts, so I have resorted to the expedient of placing a sixteen-candle-power lamp in the circuit (in series), the resistance of which reduces the original electromotive force aside from the action of the controller to an initial current of fifty-five volts The result is, that on advancing the decimal slide of the controller to 1, enough coil resistance is removed to secure a current of one-tenth of fifty-five volts, or on advancing to 2, two-tenths of fifty-five volts, equal to eleven volts; and on advancing the centesimal slide there will be added at each successive coil contact one one-hundredths, two one-hundredths, three one-hundredths, or four one-hundredths of the initial fifty-five volts, or, if stopping at 4, equal to two volts, which, added to the eleven volts of the decimal slide, makes in all thirteen volts. This is about the arrangement of the mechanism with which I have treated most of my cases. The controller has been constructed and has been thoroughly tested with a view to absolute safety, the details of which have previously been described.

I have used exclusively the bipolar method, as it is conceded by all to be equally if not more effective than the monopolar, and it is more convenient to the operator and less disagreeable to the patient. Not more than two needles, one representing the positive and the other the negative pole, should be employed, as there is no advantage in the use of multiple points, and it is thought to be more difficult to estimate the exact amount of destruction when more than two points have been inserted.

The parts of the needles intended for insertion into the spur should be from fifteen to twenty millimetres in length, about half a millimetre in thickness, and they should lie parallel and distant from each other about three millimetres.

The material which I have found best adapted to the purpose, all things considered, is irido-platinum, in which enough ididium is placed to make the composition very hard and stiff. A very sharp point can be given this substance, and its penetrating power is almost equal to steel. Not being oxidizable, irido-platinum needles can be used repeatedly, and hence can be permanently soldered to metallic conductors running through a light handle, which then constitutes the needle-holder. I have devised and had constructed by the McIntosh Company such an instrument, which meets all requirements, and it has the advantage of being always ready for immediate use, without loss of time in screwing and unscrewing steel or gold-plated needles into an adjustable needle-holder. Moure and others recommend steel needles, especially such as are used by sailmakers. That connected with the positive pole will oxidize, which does not harm the patient, but necessitates replacing the needle by a new one at each treatment, and I have been unable to obtain a neat, light adjustable needle-holder which would firmly fix and carry two needles, and to use separate needle-holders is awkward. Even steel will not penetrate bone, and irido-platinum will easily penetrate cartilage.

I have treated by the electrolytic method ten cases, and for the sake of brevity, and to enable us the better to draw definite conclusions therefrom, these may be classed in three types according to the compo-

sition and location of the spur and the degree of success attained. Three of these cases have already been reported in detail, so that others will be selected for elaboration as representatives of the various types.

TYPE I. STRICTLY CARTILAGINOUS SPURS.

Case I.—Mr. R., a medical student, has witnessed in my clinic at the Northwestern University Medical School operations for the removal of septal spurs by both the surgical and electrolytic methods, and he willingly submits his spur to treatment by the latter process. It happens to be of the strictly cartilaginous class, the sort of spur best adapted for reduction by electrolysis.

It is an ovoid excrescence, truncated or flat at the base, projecting from the right side of the septum, a distance at its point of greatest thickness of about five or six millimetres, sufficient to occlude almost entirely the right nostril. It is confined to the quadrangular cartilage and is implanted upon the convexity of a slight but, in itself, not material deviation of this part of the septum.

Electrolysis by means of the Edison current and McIntosh current controller, one sixteen-candle lamp in the circuit; bipolar method, with the author's needles or irido-platinum, which were inserted into the body of the spur well toward the bottom, the thickest part, one needle above the other and extending almost through the spur, a distance from the front to the back of about eighteen millimetres. A ten per cent. cocaine solution on cotton had previously been applied to both sides of the septum for fifteen minutes. The decimal slide of the current controller was pushed to 1; the needles then being inserted, the milliamperemetre registered twenty-milliamperes; the slide was then advanced to 2, which equals a current of eleven volts, the metre registering forty milliamperes. On making contact 2, a slight shock was felt. No further increase was made in the current in this case, as forty milliamperes is adequate. This was maintained for eight minutes, during the last five of which the patient complained of feeling faint, but it was not necessary to change position or suspend the treatment. The pain was slight, the patient not regarding it as of any moment. There was evolution of gas with crackling sounds, and at the end of eight minutes the larger part of the spur had assumed a mottled bluish and whitish aspect.

At the end of one week the slough had not yet separated, although some shrinkage in size was apparent. Annoyance occasioned by incrustation was at once relieved by the use of an ointment of yellow oxide of mercury in vaseline, two grains to the ounce.

At the end of two weeks the slough had disappeared, leaving a granulating, grooved surface through the lower part of the spur. The loss of substance is pronounced; had it been more so, perforation must have resulted.

At the end of three weeks the treatment was repeated, but for a shorter period of five minutes, to the upper part of the spur, which is not so thick. This followed much the same course, and the result is satisfactory, abundance of space and a fairly even surface having been obtained.

The chief difficulty in the reduction of cartilaginous spurs is to determine exactly when sufficient destruction has been effected. One does not wish to produce a perforation, and a close watch should be maintained in the opposite nostril and the electrolytic action discontinued on the slightest mottling in hue or escape of gas from that side of the septum. But there is reason to think that too great destruction can be effected even short of the production of these danger signals, and other safeguards, such as not inserting the needles too deeply, nor permitting the treatment to endure too long, should be kept in mind. The duration necessary depends somewhat, of course, upon the current strength; but with the metre registering from fifteen to forty milliamperes I have not found it necessary to exceed from six to eight minutes for the devitalization of cartilage. The continental authors cited men-

tion fifteen to twenty-five minutes as the duration of their seances, would seem unnecessarily long.

(To be continued.)

Surgery.

IN CHARGE OF
DR. T. H. MANLEY, New York.

OVARIOTOMY, EIGHTY-EIGHT QUARTS OF FLUID: RECOVERY.

Reifsnyder (Amer. Journ. of Obstet.), describes two cases of ovariotomy performed on native Chinese women in the Margaret Williamson Hospital, Shanghai; both patients recovered. In the first case the patient was 23; the tumor weighed 80 pounds. The second patient was 25 years of age; she married at 19, and soon afterwards her abdomen began to enlarge. She had never been tapped. She was 4 feet 8 inches in height, and the circumference at the umbilicus was 5 feet 7 3-4 inches. She passed about 16 oz. of urine in twenty-four hours, free from albumen; its specific gravity was 1026. Her appetite was good, and the bowels acted once or twice daily. She had been unkindly treated as a sterile woman unfit for domestic work. After numerous precautions, ovariotomy was performed. Chloroform was given; her head and shoulders had to be somewhat elevated; she took but little of the anesthetic. Eighty-eight quarts of fluid were removed; the tumor consisted of one large and one very small cyst; there were free adhesions superiorly. The empty tumor weighed 6 1-2 pounds. There was no ascitic fluid in the abdominal cavity. The pedicle was long and about 2 1-2 inches broad. The abdomen was washed out, then the wound closed with twelve silk sutures. There was much shock at first. After the first day she passed urine voluntarily, and her bowels were moved forty-one hours after operation. On the second day there was flatulent distension, the pulse rising to 102 degrees. Rochelle salts were given. Her second night was the worst; she had two hypodermic injections of digitalin (1-100 grain), brandy by the mouth twice, one turpentine enema, and a capsule of turpentine taken by the mouth. Afterwards she did well. Her weight, two months after the operation, was 92 pounds.

FROM

Foreign Exchanges

BY DR. F. E. CHANDLER,
Boston, Mass.

THE TREATMENT OF CROUPOUS PNEUMONIA WITH DIGITALIS.

Naegeli-Akerblom (St. Gallen). Col. fur Klin. Med., 10 August, '95.

The treatment of pneumonia with digitalis was first brought into notice by Petresco in Bucarest. He used doses of 4-8-12 gm. digitalis pro die without any bad effects whatsoever, and had a mortality of 1.2-2.6 per cent in 1192 cases treated with it, while other methods of treatment were followed by a death rate running, in some cases, as high as 34.5 per cent.

Koepfel lost one in 15 cases treated with digitalis (3-4 gm. pro die in infus.)

Fikl had, on following the same treatment, but one death in 61 cases.

Lepine on treating forty pneumonia cases with digitalin (0.003-0.006 pro die) got equally favorable results.

Loewenthal, on the contrary, found nothing to especially recommend it.

The use of digitalis in pneumonia has been in constant employment by Massini, in Basle, since 1871. His initial treatment is 1.5-2.5 gm., fol. digitalis in 200 gm. water in infusion. Dose, one tablespoonful every two hours, or at the crisis with another 1.5 gm. fol. digitalis in infusion, also considerable camphor and alcohol.

The author gives 2-3 gm. fol. digitalis to 200 gm. infusion in the first days of illness, this to be used up in two days. On the following days he recommends:

R. Camphoral 2.0
Lig. Ammon. Anis 8.0
Sig.—4-5 drops hourly.

If the pulse be over 100 and the

temperature above 39, the digitalis is to be repeated

Digitalis frees the circulation in the lungs and stimulates the vagus this directly affecting the breathing.

Experiments on rabbits show that digitalis triples or quadruples the number of leucocytes in the blood and in this way is an invaluable adjunct to the treatment of pneumonia.

In the Therapeutische Wochenschrift of August 11, 1895, is a six-page article, by Dr. Y. Corin, of Luettich, on the same subject. His results are identical with those of Dr. Naegeli-Akerblom, although he uses the chloroform-digitoxin as prepared by Prof. Schmiedeberg, of Strasburg, Alsace.

C. Sziklai in No. 13, of the Wiener Med. Presse, reviews a case of bilateral croupous pneumonia which was cured in 48 hours' time by the use of pilocarpin.

Lepine, of Lyons, in the Semaine Med., of July 31, recalls the cases of three patients in his clinic whose only nourishment while undergoing treatment for hypersecretion of HCL in the stomach, was in the form of enemata.

The enema consisted of 140-150 gm milk or bouillion, two yolks of eggs, 10 gm. sugar and 20 gm. wine, six times a day.

The first patient lost but 800 gm. in 17 days' time; the second gained 550 gm. in a fortnight, while the third, by letting good digestion wait on appetite, tipped the scales 2 1-2 kg. heavier at the end than at the beginning of his treatment.

Smirnow (St. Petersburg), gives in the Berliner Klim. Wochenblatt, his experiments in the treatment of diphtheria with an artificial antitoxin.

The chief Austrian Board of Health in its last meeting decided that beer slops were highly prejudicial to the public health and must not be mixed with fresh beer under penalty of sections 403 and 407, etc., etc.

Speaking of beer, a very dry subject by the way, reminds me of the test imposed upon the brewers of the good, old Reichstadt Strasburg in the days long gone by When the beer had had its six months of cellar and was ready for sale, the city fathers, 16 in number, with the burgermaster, went to the brewery and took their seats on two long benches, well wet with beer, one on each side of the council table. After two pots (one gallon) of the brew had been sampled by each of the Councilors, upon a signal given by the Mayor, all arose together and if the benches did not come up with them, the beer was condemned to be run into the gutters

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In the Memorabilien, under date of August 25, 1895, Dr. Edmund Zuntz, of Dresden, has a very interesting article on the prevention and treatment of ophthalmia nenatorum. He shows himself as strongly opposed to the use of a two per cent. solution of silver nitrate as prophylactic and says emphatically, "As to preventive treatment, thymol is a cheap drug, as well as the least irritating, the safest and the one which does its work the quickest. A saturated aqeous solution of thymol (1-1000) will stop the developement of the gonococcus in a few moments, and then destroys it." Digressing somewhat from his subject, he offers the following food for reflection for infants and invalids. "It is on account of its rapid and certain action on the gonococcus that I have highly recommended it to the puellae publicae as wash water (for the eyes?). It can also be used by the men and, after urinating, a few drops may be injected into the urethra. It is sure and harmless!"

For the treatment of a fully developed gonorrhoeal ophthalmia the eyes are to be cleaned with cool water and then finely powdered iodoform blown into the conjunctival sack. Cloths wet in ice water, as in the usual treatment.

"If the swelling of the lids be extreme and the formation of pus excessive, the powdering with iodoform must be often repeated.

Great success is claimed for this treatment and surely it is simple enough to merit a trial.

Goldman (Therap. Wocheusch.) says in administering trional keep the following points in mind:

1. Never give doses of more than 2 gm. 1 to 1.5 gm. is usually sufficient.

2. Never give it dry or with cold water.

3. Interrupt its administration occasionally.

4. To prevent accumulation and hasten excretion give some "soda-water or mineral water charged with CO2 during the day

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From Paris comes the announcement of Champonniere's discovery of the action of guaiacol as a local anesthetic.

It has been tried in extracting teeth in the form of a 5-10 per cent. solution in olive oil, injected into the gum near the tooth which was to be pulled. The operation was wholly painless Anesthesia appearing after 5 to 10 minutes after the injection.

From the Blatt of Klin. Hydro-therapic we find a notice of Prof. Dr. Aberg's ice water cure for phthisis. It consists in slowly freezing the patient until he commits suicide to get away from his tormentors.

The Revue Medic de la Suisse Romaude contains a notice of the death of Dr. Vialet, who will be remember-er as the author of that remarkable paper on "The Nervous Centres of Vision and the Intra-Cerebral Visuel Apparatus."

Dr. Vialet was one of the most promising young physicians of the continent, a thorough worker, an indefatigable investigator, and of a modesty seldom to be found in one of his attainments.

CHANDLER.

De Marwedel, in an article on entero-anastomosis (Beitrage zur Klin., Chirurgie, Bd 13, Hft. 3), after an elaborate historical retrospect reviews, conspicuously the Murphy button method. He himself made 14 experiments on dogs; five simple anastomosis; four resections; three oblique end to end, three cholecystenterostomies, and one gastro-enterostomy

Of five resulting deaths, not one can he ascribe to the method per se (post hemorrhage); in four other cases due to perforation-peritonitis, one case following faulty technique and the other three, due to faulty construction of the button—the space beween the male and female being insufficient to grasp the wall of the bowel.

Twice the button failed to escape, once remaining in the blind pouch of a bowel, and the second (gastro-enterostomy) remaining in situ, due to partial atrophy of the enclamped walls of the button.

In operating with the button, he fully follows and compliments the technique, as devised by the inventor. With no hesitation he laurels the Murphy invention; but advises its conserative use, over that of the Lembert-Czerny suture, and in such cases only to be employed where the condition of the patient requires speedy performance.

De Kapertowsky, "How often is found gonococci and other bacilli in the cervix uteri of prostitutes discharged cured," states, "From the hospital these prostitutes are discharged cured, when on the morning examinations nothing abnormal is found on the mucous membrane of the genital organs, when by pressing on the urethra no secretion is noticed, and finally when under examination with speculum no secretion, or at least only mucous secretion, is found. The author examined 163 prostitutes, 92 of which, from clinical symptoms, were diagnosed as gonorrhea, and 71 others ailments, with exclusion of gonorrhea. From the 92 cases, 9-10 per cent. the gonococci were found, while other bacteria 33-36 per cent. From the 71 cases, 5-7 per cent, gonocicci, and 49 per cent., other bacteria. Thus, under police regulated healthy prostitutes, 8 per cent. have the gonococci, and 41 per cent. other kind of bacteria. K. concludes that by thorough microscopical examination only few of the prostitutes could be discharged cured from the hospital.

A. D. D.

Miscellany.

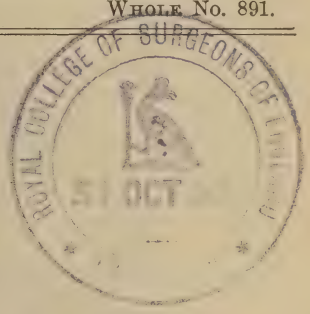
THE PHYSICAL SIGNS OF ABDOMINAL DISEASE.

The first of a series of articles complied from Haymen's lectures by Lion (Arch. Gen. de Med., August) on certain forms of abdominal disease, is devoted to the consideration of the effects of compression, or, as he terms it, "corset disease." Judging from Hayem, this is a more complicated condition than would at first appear, for, according as the natural conformation of the throrax varies, so construction by the corset differs in its effects. The author describes three chief deformities. The first is suprahepatic construction, and is found in women with a naturally large thorax, and of low stature. There is diminution of the antero-posterior diameter, and the lower ribs are displaced outwards. In this form there is downward displacement of the liver, and, in a general way, all the abdominal organs, including the pyloric end of the stomach; the stomach, therefore, assumes an almost vertical position, and the transverse colon becomes V-shaped. In the second variety there is hepatic constriction, the thorax is long, and tapers; there is not much external deformity, but merely a tendency to bending outwards of the lower ribs at their angles. In this variety there is diminution of abdominal capacity, the liver increases in vertical extent, and presses the pylorus and duodenum aganst the vertebral column. There is thus no displacement, but compression; the result is dilatation of the stomach towards the pyloric end, with, perhaps, hour-glass constriction as well. The third variety is considered by the author as the most important and the least recognized. It is the subhepatic. The compression takes place at the level of the last ribs and the lower margin of the liver. In many cases a certain amount of shortness of the sternum induces this deformity. The result is a displacement upwards of the liver, with consequent tension of the diaphragm. This produces a certain immobility of the diaphragm and the lower thorax, so that palpitation and dyspnea may be present on movement, and even slight exercise may cause general discomfort. The transverse colon is also displaced, and so with deficient diaphramatic action constipation is caused, especially as the dyspnea, etc., induce the patient to lead an inactive life.

E. B. Treat, Publisher, New York, has in press for early publication the 1895 International Medical Annual, being the thirteenth yearly issue of this eminently useful work. Since the first issue of this one volume reference work, each year has witnessed marked improvements, and the prospectus of the forthcoming volume gives promise that it will surpass any of its predecessors. It will be the conjoint authorship of thirty-eight distinguished contributors and specialists, from America, England and the Continent. It will contain the progress of medical science in all parts of the world, together with a large number of original articles and reviews by authors on subjects with which their scientific reputation is identified. In short, the design of the book is to bring the practitioner into direct communication with those who are advancing the science of medicine, so he may be furnished with all that is worthy of preservation, as reliable aids in his daily work. Illustrations in black and colors will be freely used in elucidating the text. A most useful investment for the medical practitioner. The price remains the same as heretofore, $2.75.

The Times and Register.

Vol. XXX. No. 14. Philadelphia, October 5, 1895. Whole No. 891.



Original.

RIGIDITY OF THE PARTURIENT CERVIX AND LOCAL ANESTHESIA IN LABOR.

BY T. H. WEAGLY, M. D.,
Marion, Pa.

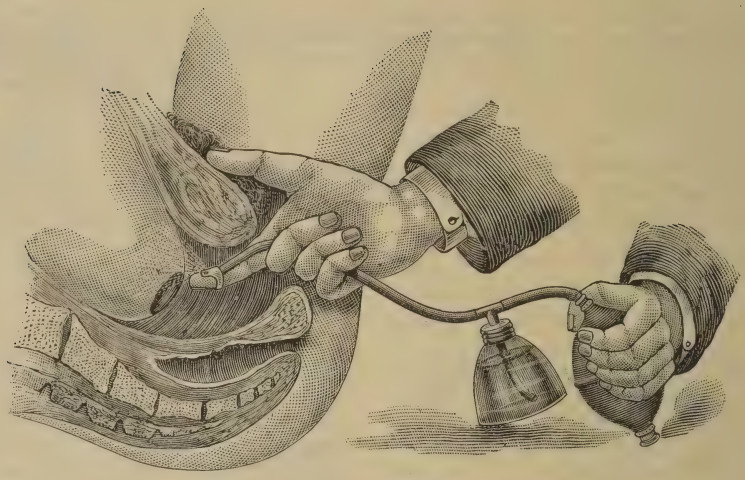
The leading title of this paper will doubtless recall to the mental vision of my professional brethren the recollection of many weary hours impatiently endured within, or in proximity to, a lying-in chamber, in which the anticipated proceeding lagged in tedious and ineffective futility, as for untold ages rigidity of the cervix has been to the obstetrician a frequent "opprobrium medicorum," persistently resisting his most earnest efforts for its relief and proving a trying ordeal both to patience and patient. So well recognized are its exasperating sequences that manifold plans and suggestions have been from time to time lauded as effective, only to be followed by failure and disappointment.

This experience, entailing loss of time to the medical attendant and protracted suffering to the accouchee, led the author to give this subject much careful thought and investigation, with the following conclusions and results:

Rigidity of the cervix is usually manifested in one of two forms differing in pathology and clinical appearance. In the first and most frequent phase, the os uteri presents to the finger a more or less constricted orifice, whose edges are thin and hard, the cervical tissue being tense, and at times seemingly as inelastic as leather. This condition apparently arises from perverted nerve energy, due to an iritability or hypersensitive state of the terminal fibres of the ovarian plexus, especially distributed within the circular sphincteric muscles of the interior cervix. In this class of cases the pains are usually short, acute and agonizing, but ineffective, with a prolonged accouchement. Relaxation of this almost tetanic contraction and relief from its excruciating acerbity can only be secured by obtunding the sensory fibres and paralyzing the motor filaments in the constricting area.

In the second form the cervical parts are redundant, and apparently, at times, hypertrophied, the tissues being thickened, congested and edematous. To relieve this, it is necessary to reduce the swelling and congestion, and render the enlarged muscular structures lax and elastic.

In our endeavors to bring about these desirable changes we are confronted by several obstacles. Ointments are not readily absorbed, vaginal douches are inadequate and painting or injecting with a hypodermic needle through the speculum impracticable. My efforts to surmount these impediments led to the evolution of a flexible finger spray, in which the tip, easily and securely adjusted to the index finger, near its extremity, may be carried therewith into cavities and a jet or spray directed to the tissues immediately in front of its palmar aspect, with



no risk of violence or injury to the parts. By this means, as shown in illustration, a solution may be readily conveyed to and gently distributed over both the vaginal and intra-uterine surfaces of a rigid cervix, passing repeatedly around within and without, using only sufficient fluid to perfectly anoint the tip of the finger, thus rubbing in, or more properly, pressing the liquid into the crypts and follicles and inducing rapid absorption.

The medicament employed is a combination embracing relaxing, antiseptic, analgesic and centric vasculo-motor properties. The formula as used by the author is as follows:

Phenolized Cocaine Sol. 3 per cent. Fl. oz. j.
Trinitrin Sol. 2 per cent. gtts. x.
Strychina Sulph. grs. 1-6.

Antiseptic Comp. or Listerine.	Thymol, Boracic Acid Gaultheria, Aqua, etc.	Fl. dr. j.

M.

This combination, the result of clinical observation and careful therapeutic consideration, meets several requirements which may be summarized as follows: The phenol is both antiseptic and anesthetic; the cocaine anesthetic and relaxing, while systemic or cardiac depression is not only obviated by trinitrin and strychnia, but the latter drug as a centric nervo-muscular stimulant tends to arouse and strengthen the dormant uterine contractile tone. With this instrument and solution, I have not only been enabled to expedite and soothe the first stage of labor, but further experience has demonstrated that later, when the occiput enters the inferior strait, by spraying the vaginal surface of the perineum and outlet, the pangs of extrusion may be reduced to a minimum, which as members of a merciful calling, it is certainly our duty to exert our best efforts so to do.

I cordially and earnestly invite the attention of the fraternity to the above facts for their consideration, and if by so doing I may be the means of lessening the oft deprecated agony of delivery, I shall feel that my feeble efforts in behalf of womankind have not been in vain.

Note.—My instrument was made for me by Charles Lentz & Sons, Philadelphia, who can supply the same, together with a sample of the aseptically prepared solution.

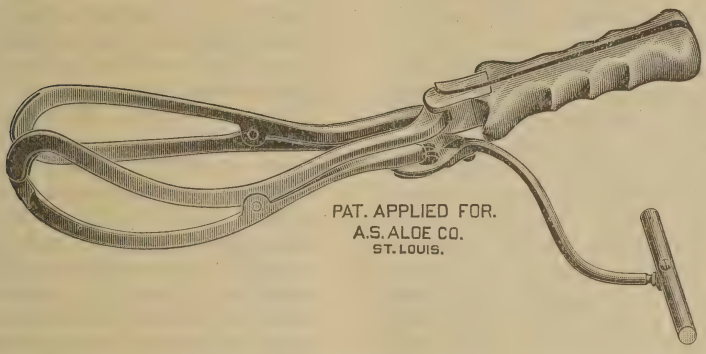
OBSTETRIC FORCEPS WITH NARROWING, ADJUSTABLE BLADES.

BY J. M. WHITE, M. D.
Shuqualak, Miss.

The forceps illustrated here are devised for cases demanding immediate delivery, where the os uteri is too small to admit of the ordinary blade. The blades of these forceps being divided into two parts, the end of one part is forked so that the end of the other part works into it. The forked end extends into the handle and the other part or end is extended into a lever, to which is attached an axis tractor.

One blade at a time is first closed and introduced; after it is in position on the child's head, it is opened. The second blade is likewise introduced and opened, and the forceps locked.

The advantage of these forceps is the ease of introduction through smaller apertures, and, hence, they can be used in placenta previa, convulsions, or other cases demanding quick delivery, where other forceps would be too large for a partially dilated os.



Dr. J. M. White's obstetrical forceps with narrowing and adjustable blades.

MEDICINAL TREATMENT OF TYPHOID FEVER.

By Gustavus Blech, A. B., M. D., Detroit, Mich.

(Read before the meeting of the Mississippi Valley Medical Association, September 6, 1895).

We have no specific treatment for typhoid fever. Hygienic and dietetic treatment alone are not sufficient, and although the so-called abortive treatment of this malady is nothing else but an illusion of a few optimistic physicians, there are a good many remedies known which will influence considerably this disease.

As late as 12 or 15 years ago the treatment was symptomatic only, the attention being directed especially to the high fever. At that time patients died with a low temperature.

To-day our treatment is more rational. We have investigated into the cause of this disease, found it to be of microbic origin, hence we treat typhoid fever antiseptically. The germs are found principally in the intestines, hence we will employ intestinal antiseptics. I will speak of it later.

As an antipyretic quinine was a favorite about 15 years ago. At present its use is considerably reduced and modern antiseptics (phenacetine, antifebrine, antipyrine) have been substituted. Hydropathy has a great many friends. On the other hand the number of opponents can not be underrated. Medicinal antipyretics in infectious diseases are dangerous, as they oppress the heart. I treat the fever if it reaches a high

degree internally with alcohol (wine cognac) externally sponging with a 20 per cent. aqueous solution of alcohol.

Now to the antiseptic treatment. Intestinal antisepsis is the parole. My previous experience with Hydrozone in gastric and intestinal affections in both adults and children induced me to try it in typhoid fever. See my report headed "The Rational Treatment of Cholera Infantum," published by the New York Medical Journal (March 2, 1895). I note with pleasure, that the editor of the Mirror, Dr. I. N. Love, of St. Louis, the well-known teacher of Paediatrics, in an editorial in the June issue of his valuable monthly, fully agrees with my methods.

I found Hydrozone not only to be a good antiseptic, but a splendid remedy against the stupor, in which all of my patients were laying and which clearly proves that the cases that I had to deal with were serious.

Soon after a few doses of Hydrozone (diluted with water 1 to 32) were administered, they felt comfortable, the semi-unconsciousness ceasing. I think the blood and blood corpuscles become saturated with oxygen and thus the brain is kept in activity. I alternate the internal treatment between Hydrozone, hydrochloric acid and alcohol.

Hydrozone has proved to be in my hands more powerful than any other antiseptic, and yet it is harmless. As a direct medication I irrigate the bowels of every typhoid fever patient with four quarts of clear water to which two ounces of Hydrozone are added. I would repeat this procedure twice daily. Depending on the temperature of the body, I would use cold water in high fever, otherwise lukewarm water will be more agreeable, and accomplish the same purpose. Irrigation of the bowels with cold water has also an antipyretic effect. Such irrigations will also check the diarrhoea and encourage a natural catharsis. They also reduce the hyperaemia and inflammation of the intestinal mucous membrane, annihilate the bacilli and if ulceration be present, will stimulate granulation and produce a healthy surface. This irrigation with diluted Hydrozone is the best remedy to prevent perforation of the bowel.

In order to obtain the desired results from irrigation, we must introduce the rectal tube beyond the sigmoid flexure. The tube, which should be neither too flexible nor too stiff, must be well oiled and carefully introduced. In this way, the fluid will enter even the caecum and reach the seat of the disease.

The treatment as I have outlined in this paper will not only have a curative effect but will also prevent the usual complications. Of course, symptoms, which per se are liable to influence the disease or endanger life itself, must be treated accordingly. In conclusion I beg to submit a short report of six cases in which the above treatment was successful.

Case 1.—Otto S., German, shoemaker, aged 24. Saw him first August 14, 1894. Has been actually sick but a few days, although as he said, he felt ill over a week. Headache, slight chills, thirsty, constipated, temperature 102.5, slight cough. Physicial examination of chest and abdomen gives negative result. Could make no definite diagnosis. Prescribed calomel and bicarbonate of soda. Saw him again on the 16th. Temperature almost 104. Could feel swelling of the spleen. Tympanites. Sleeps bad in night time. Diagnosis. Typhoid fever. I ordered at once diet and sponged the body with diluted alcohol. Temperature taken five minutes after sponging 102. On the same evening I made an irrigation of the colon. A good deal of fecal matter was evacuated.

August 17, fever 104 degrees. Arrhythmia of the heart. Headache intense. No appetite. Sponging of the body by nurse. Irrigation whenever fever high was ordered. Hydrochloric acid.

August 18, same symptoms. Stupor. Has been delirious all night and appeared apathic when visited. Same treatment.

August 19, same symptoms. Roseola. Prescribed Hydrozone diluted. Rested well this night. Old treatment continued.

August 20, appears brighter. Asks many questions as to his disease. Wants to know whether his disease, the character of which was not disclosed to him, is infectious, and if so, wishes his younger sister removed.

August 25, slight hemorrhage from the bowel followed by a state of semi-collapse. Was called in a hurry. A hypodermic injection of sulphuric ether was administered, which improved his condition soon. Irrigation of the bowels with diluted Hydrozone was now made twice daily.

Patient was discharged September 2, and advised to observe diet and to remain in bed for a week. Complete recovery.

Case 2.—Miss Agnes T., Irish-American, actress, age 21, of a nervous temperament. Saw her first, August 25. Patient looked pale and emaciated. She described her condition as due to over-work and mental strain. Has been sick for over a week and was treated by an Eclectic physician. Had all marked symptoms of typhoid fever which diagnosis was confirmed on the next day. The treatment in this case was similar to the former with the exception that I had to resort to the wet pack on the 30th, as the temperature, 104.5, was not reduced by the sponging. Although the dry tongue and lips indicated a grave disease, the patient was always conscious and able to talk, which I attributed to the administration of Hydrozone. She made a good recovery after an illness of four weeks, three weeks being under my care. Patient left town to join a company in October, 1894.

Case 3, was that of a robust smith, Peter R., aged 30, married, father of four children. He was first seen by a Senior student, now a physician, practicing for a living at that time under my supervision. He did not make a definite diagnosis, attributing his fever to a cold, and prescribing pilocarpine and antipyretics. He called me in consultation August 20, fearing death of the patient. Temperature 105, pulse 110. Arrhythmia, stupor, swelling of the spleen was rather difficult to be determined, but I could feel an increase of its volume by palpation. Tympanites. No roseola, dry lips, dry tongue.

I advised sponging, which reduced the temperature at once to 103. Hydrozone was given one ounce to a quart of water as a drink. Irrigation of the colon with cold water and Hydozone was practiced, and the patient's general condition improved the very evening. Mr. K., the medical student, continued the treatment, with irrigations and sponging and prescribed internally, digitalis, strychnine and Hydrozone. Patient made a good recovery. I cannot say when he was discharged, but Mr. K. informed me that he never saw him in such a grave condition any more. With moderate symptoms he recovered after two or three weeks.

Case 4.—Joseph S., waiter, born in Polish Russia, aged 19, eight years in this country, was never sick during that time. He complained of general weakness, chilly feeling, headache, etc., and thought the "Indian summer," as the warm fall of St. Louis is called, was obnoxious to his health, and that he contracted malaria. There were no chills, however, only a slight rise of the temperature. I saw him first, September 19, but did not think much of his trouble. I prescribed Mariani wine and patient really felt better. Was called again September 24, and found patient in bed. He told me he sometimes felt cold, sometimes warm. Temperature 101.5, pulse 90. Is thirsty and desires no food. Thinking of malaria, I prescribed 10 grains of quinine ter per diem. Conditions the next day worse. I made a different diagnosis when I visited him the next day, namely typhoid fever. Patient was treated on the same principles as the former, but got pneumonia during the state of convalescence. After an illness of four weeks, however, he completely recovered.

Patient contracted in November, gonorrheal urethritis, which proves that the double malady left very little impression on him.

Cases 5 and 6, were sisters living in one house. A widow, Mrs. L., aged 32, and Mrs. B., married one year. Both had children. Mrs. L. took sick September 24, and called me the next day. Mrs. B. took sick September 29, and both sisters made a good recov-

ery. Whether one infected the other, or whether the infection came from a general source, I do not know. There was nothing unusual in the course of their diseases, the same being of rather a moderate character. After two weeks' treatment both were discharged well.

The characteristic fever curve, the swelling of the spleen, tenderness in the iliac region and roseola, left no doubt as to the diagnosis.

The younger sister was treated by me until March for anemia with iron and maltine. She was not anemic before, and this condition must be regarded as due to and following the attack of typhoid fever. When I left St. Louis (in March) the anemia was much improved. She felt stronger and objected to be treated by a physician declaring that she feels the maltine and iron preparations will bring her back to full health.

A PRACTICAL STUDY OF THE BLOOD AND THE CIRCULATION, WITH A HISTORICAL REVIEW OF THE SUBJECT AND ITS BRIEF CONSIDERATION FROM THE STANDPOINT OF ITS CLINICAL COMPOSITION, ANATOMICAL STRUCTURE, AND PHYSIOLOGY; INCLUDING CLINICAL STUDIES, AND EXPERIMENTAL RESEARCH ON THE LOWER ANIMAL.

BY THOMAS H. MANLEY, M. D.,
NEW YORK.

Continued from last number.

PART III.

THE HEART THE CENTRAL ORGAN OF THE CIRCULATION; CONSIDERED WITH REFERENCE TO ITS MECHANICAL CONSTRUCTION; ITS VITAL ENERGY, OR DYNAMICS, AND ITS SHARE IN MOVING THE BLOOD CURRENT.

Until a comparatively recent date, since the promulgation of the cellular theory and extensive researches on the functions of the corpuscular elements of the blood, the heart was regarded as the sole agent in the propulsion of the sanguinary current.

It was looked upon as a very simple piece of machinery, a sort of force pump, with a quadruple action, to receive the blood on one side, and force it through pulmonary organs, to be again received on the left, and from thence to be sent forward, through the systemic vessels.

This was certainly a simple view to take of this muscular reservoir, quite within the grasp of the most mediocre mind. It was therefore natural enough that the application of physics was directed to all those varied mechanical phenomena associated with cardiac movement.

Clinicians who have a special study of physical diagnosis have coined an almost endless category of terms, for those aberrant sounds and motions, so commonly associated with valvular lesion or functional derangments of the heart.

Investigators have, however, discovered that there are beings in animal creation, preserving an active circulation, which are cardiac in construction; and every pathologist of any extensive experience knows how deceptive and unreliable physical diagnoses of cardiac or vascular disease are; that for instance, in some cases, which in life gave indubitable evidence of structural lesion, and valvular alteration, nothing whatever was found on necropsy pointing to existing organic disease, and, per contra, those have been encountered, who in life were never cognizant of heart deficiency, but showed on post-mortem examination the most varied and pronounced evidence of valvular disorganization. And how many are there who, relying too implicitly on physical signs alone, have decided that extensive valvular lesion existed; when after a few days, perchance, normal equilbrium is restored and the heart disease (?) has vanished?

My own experiments have incontestably proven that the circulation of the blood is certainly not entirely dependent on the heart; and that the vessels, especially the capillaries, stimulated in some unknown manner by the corpuscles, continue to move the blood onward, long after the heart has been wholly removed from the body.

The animal selected for experimentation was the frog. This batrachian, for many reasons, was chosen as the most desirable to make the tests on, for though of the amphibious order, while on land he must respire to exist. It was, therefore, easy to secure ready and complete pulmonary narcosis in the extended and complex series of experiments undertaken on the circulatory apparatus. I found that the most satisfactory manner to proceed was to force ether anesthesia, until the respiratory reflexes were totally paralyzed and we had secured what might be garded as respiratory death, that condition so commonly witnessed when chloroform is administered in surgical cases. The animal lies limp and lifeless, but we will observe that the heart continues to pulsate. Now, if we open the thorax and remove the heart from its vascular connections we may proceed through the same incision to examine the lungs, which though greatly collapsed and disorded exhibit along the course of the larger peripheral capilliaries moderate corpuscular movement. In some areas the motion is an ebb and flow, a to-and-fro movement. A group of corpuscles will move onward, and then halt and recede; to again advance, though in other places; the course is in one direction only.

If we will now withdraw the tongue and so expand it that its finer vessels will show well under reflected light, we will observe in several of the finer vessels and in the adjacent capillaries a distinctly defined movement, a modified circulation. It is true that pathological changes are visible in the corpuscles and vascular walls, and that the blood moves slowly and without rhythm, or regularity, yet there is motion and the circulation is intact, though incomplete. I have seen it continue for more than two hours in the frog's tongue after cardiac evisceration.

The swift swirl through the capillaries has ceased, and are now occupied with rows of blood corpuscles packed closely together. In others those protoplasmic tubes, continuous with arterial termini, are the seat of every variety of corpuscular movement within their lumina. Their walls are evidently widely dilated, for we will now observe that the red corpuscle is widely expanded, its free, ovoid form clearly showing its crescent-shaped mucleus. The haematoblasts move on with the plasmic current, though in places where the vessels take a sharp, spiral course we may find the leucocytes, engaged in the stomata of the endothelia, or exercising the most frantic gyrations, as though seized with violent convulsive action. Under low power, in this state, the veins show a deep blue tinge, while the arteries preserve their bright, clear scarlet hue, and where they are about to break up into capillaries we will, with great ease, in many places see through their transparent adventicia the moving corpuscles. This very brief and incomplete, though faithful description of what any experienced observer may witness, under the circumstances cited, tend to controvert that what has until lately been taught, with almost dogmatic emphasis, is probably erroneous or based on a misinterpretation of normal phenomena, in the following particulars, viz.:

1. That the maintenance of the circulation is not solely dependent on cardiac force, but that it may continue after the heart is removed from the body.

2. If we are to understand by death the cessation of respiration and heart action, then the arteries do not, as we have been taught, at the moment of death discharge their contents into the veins, but preserve their vitality for considerable time after, especially in the finer ramifications.

3. There are ample and sufficient

reasons for believing that both the vessels themselves, the capillaries, and above all, the haematic elements, and the corpuscles, are endowed with highly vitalized properties, which, while moved onward by cardiac impulse from the venous to the arterial torrent, collectively, by innate and specific functions, by chemical changes, muscular movement, etc., finally assist in that incessant march or migration of the blood, which we designate the circulation.

It might be opposed to the above deductions that observations derived from animal experimentation cannot be accepted as applying to man, which in its fullest sense is partly true, yet all our greatest advances and most valuable achievements have been the outcome of researches and experiments on these lines.

Indeed the very ground work and foundation of nearly all our latest and most valuable acquisitions in physiology, pathology and bacteriology are quite entirely dependent on animal experimentation; moreover, fine physiologico histological study of the blood and other structures is quite impossible without it.

It might be objected also that if the arteries and capillaries conveyed blood for a time after death the parts on division should freely bleed. This feature of the subject will be considered later, in connection with the subject of haemostasis, physiological and pathological.

The heart then keeps the blood in motion, the arteries distribute it, and the capillaries with the contemporaneous action of the corpuscles, chemical and vital changes, send it through the various cellular elements in the progress of growth and nutrition. Next to the heart as an important mechanical, vital factor, concerned in that cycle of the blood which renders our existence possible, are the arteries, structures endowed with many functions, which, in my opinion, are yet but imperfectly understood, and from a surgical standpoint, more particularly, deserve a serious study, a few aspects of which will be considered hereafter.

(To be Continued.)

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THE URIC ACID DIATHESIS.

Dr. John F. Barbour, in an interesting and practical article on this subject, remarks as follows:

"Uric acid has now come to be regarded as one of the great poisons, fully comparable in its evil effects upon the human body to syphilis and tuberculosis, but for more insidious and slow in its action than either of these."

In commenting upon this statement, a writer in Modern Medicine says: "We entirely agree with Dr. Barbour in his startling statement. It is remarkable that, notwithstand-

ing the fact that uric acid is thus regarded by those members of the profession who have made a careful study of this subject, and have by experience learned their inability to cope with chronic disease in many of its forms, without a recognition of the important relation of this toxic agent to many pathological conditions so little is said and done in relation to the prevention of this hydra-headed malady, uric acid intoxication."

While much can be done in the prophylaxis of this diathesis by regulation of the diet and exercise of the patient, the administration of an efficient uric acid solvent, such as lycetol, will often be of decided benefit in removing the immediate effects due to the imperfect elimination of uric acid from the system. By preventing the accumulation of this substance in the blood and tissues, lycetol, which is a tartrate of dimethylpiperazine, materially aids in hastening the cure. Unlike the alkaline salts so often prescribed in this condition it wll not dsturb the appetite or digestion, while its pleasant taste enables it to be taken for long periods, even by capricious patients.

INTRAVENOUS INJECTIONS OF MERCURIC CHLORIDE.

The administration of mercuric chloride and iodide by the intestinal canal is often difficult or impossible owing to its irritating qualities, and the pain coused by subcutaneous injections of this agent is often so severe as to militate against its administration in this manner. As against the inunction method of administering mercury we have both its uncleanliness and lack of exactitude in dosage.

Inasmuch as the method of intravenous injection recommended by Baccelli is painless except for the prick of the needle, it has obvious advantages over the method of subcutaneous injection. In order to form some estimate of the practical value of this method, Gorl has recently tried it in a series of nine cases of syphilis, choosing those forms of the disease which experience has shown to be slow in recovering under ordinary conditions. The solution employed consisted of one to three parts of sublimate in 1000 parts of normal salt solution; the injections were made every second day, beginning with one cubic centimetre of the solution, and increasing to two to five cubic centimetres.

The curative effects of the mercury in these nine cases began to appear very early in the course of the treatment, in correspondence with the observations of Baccelli and Blaschko. Two cases, however, showed early recurrence of the symptoms after the treatment was discontinued.

The technique of the operation is simple. After one of the prominent veins is made to stand out by a distally placed tourniquet, a small, very sharp and preferably short needle is thrust obliquely into the vein, care being taken not to penetrate the opposite wall. The mobility of the point of the needle shows that it is within the lumen of the vein. Care should be taken not to move the needle point about so as to wound the intima of the vessel, which would cause danger of thrombosis. If the vein is properly punctured, no pain is felt by the patient when the solution is injected. If there is doubt whether the needle point is within the vein, a little fluid should be injected, and if pain results, the point is not within the vein, and another puncture should be made. The more rapidly the puncture is made the less often will the injection fail. Often, especially when a large needle has been employed, a bluish discoloration along the course of the vein will follow, which is probably due to the escape of a little venous blood through the punctured wall into the subcutaneous tissues.

In summing up his paper, Gorl concludes that the advantages of Baccelli's method are:

(1) The painlessness of the injections.

(2) The smallness of the dose and its accurate measurement.

(3) The rapidity of the curative effects.

(4) The freedom from danger (as far as observed up to the present time).

(5) The treatment does not attract attention, and does not interfere with active pursuits.

The disadvantages of the method are:

(1) The impossibility of its application in cases where the superficial veins cannot be made prominent.

(2) The early recurrence after discontinuance of the treatment.

The last objection is the strongest point against this method of treatment, which is, however, especially adapted to those cases in which the patient fears the pain of subcutaneous or intra-muscular injections, and in which the administration of mercury by inunction or by mouth cannot be well carried out. In patients especially susceptible to mercurial poisoning it is also of advantage on account of the small does required; and on account of the rapidity with which it acts it is indicated where an early effect is needed, for example in the affections of the eye and brain during the secondary stage. In these latter cases the treatment should be followed by a course of inunctions in order to render its effects permanent.

The method of intravenous injections, then, is to be recommended only in certain cases of specific disease, and, contrary to Baccelli's views, is not adapted to the treatment of all cases where mercury is indicated.—Boston Med. and Surg. Journal.

Medicine.

IN CHARGE OF
DR. E. W. BING, Chester, Pa.

POLYARTICULAR RHEUMATISM FOLLOWING SEROTHERAPY.—GAILLARD.

A woman attacked with sore throat received an injection of 40 c. c. of Roux's serum. No immediate symptoms followed and the patient left the hospital a week afterwards. The bacteriological examination showed only staphylo and strepto-cocci. Two weeks after the injection the patient returned with polymorphous erythema and acute polyarticular rheumatism. The rheumatism yielded to two doses of six grammes per day of salicylate soda. The symptoms seemed due to the injection.

The death of Professor Hoppe Seyler, of the University of Strasburg, is announced in the Bulletin of the Academy of Medicine, on August 20, 1895.

TRIONAL AS AN HYPNOTIC FOR CHILDREN.

In the course of incessant progress in chemistry, one of the interesting objects has been the obtaining of an agent promising prompt and sure hypnotic qualities, free from any dangerous properties. Thus we have seen successively appear hypnone-paralothyde, unthane, methylene, hydrate, hypnol and chloralose. In 1885, Bauman and Kast, by combining mercaptous with aldehydes obtained sulphur-acetols, which they designated as mercaptols and which, under oxidation, were converted into derivatives called di-sulphous, which were named sulphonal trional and tetronal. Trional was selected from among these for experimental purposes. This has proved an effective remedy in children in combating insomnia in the different fevers, both specific and malarial. Given in small doses, it insures sleep of a quiet and refreshing nature. In tuberculous meningitis, it acted astonishingly well after the failure of the ordimary means; also in cerebral sclerosis it produced quiet and sleep. In chorea and tuberculosis it was also useful, but in insomnia due to pain it did not have the same results. Tolerance is good, the remedy having been given for long periods without ill effect

In resume:

Trional seems to act better than any other of the hypnotics. It is well tolerated in children; it possesses a sedative action on the brain, useful

in cases of excitement of the organ or its membranes.—Dr. Moncorvo, Bull. de l'Academie de Med.

PHYSIOLOGY AND MUSIC.

Ferrand thinks music can clearly express the sensations and sentiments, but not ideas; that it is an incomplete and imperfect art. On the contrary, M. Maidat considers music an absolutely complete art, capable of expressing all the sentiments.—La France Med.

TAKA DIASTASE.

(From the Therapeutic Gazette.)

BY FERDINAND LASCAR, PH. GR.

In the human system a continued waste takes place which it is necessary to provide for, and to this end man partakes of food which must contain the elements for this purpose. To bring such food products into proper form, so that they can be assimilated and taken up in the system, the digestive organs perform their functions, and these are of a mechanical and chemical order. The food needed is both animal and vegetable in nature, the latter forming by far the greater and more important part. It can truly be said that upon the proper digestion of his food, man's health, happiness, and very life depend, and progressive science has fully demonstrated the unerring truth of this. Any irregularity or fault in the process of digestion very soon becomes manifest and dyspepsia, malnutrition and ill health follow. As the food man partakes of is twofold, so is the process of digestion a twofold one, animal and nitrogenous foods needing an acid, while vegetable, starchy foods need an alkaline process to bring them into a soluble form ready for assimilation. The general idea about faulty digestion is that the stomach performs its duties improperly. While this, in very many instances, is undoubtedly so, the fact is, nevertheless, that in the greater number of cases of impaired digestion improperly performed processes of other organs are at the bottom of the evil in failing to properly convert the starchy food partaken of.

The changing of amylaceous food into dextrose and maltose is the beginning of digestion. All will have observed that bread, crackers, or potatoes, not being sweet in themselves, very soon become so when masticated and thoroughly mixed with the saliva in the mouth, and that their taste becomes sweeter the longer this is continued. This sweet taste is due to the conversion of the hydrated starch by the action of the saliva upon it, the saliva containing an enzyme called ptyalin, which, by its presence, splits up the starch into soluble products which I will mention later on, and this splitting-up process of the starchy food even continues after it has left the stomach. Animal foods needing the acids which are found in the stomach are digested there, but acids materially interfere with the action of enzymes which cause the conversion of starch, even destroying such action altogether. For this reason it seems practically incorrect to say that the conversion of starch continues after it leaves the mouth; but nature has provided against a too soon interference of acids, because it is now well understood that acid, especially hydrochloric acid, is secreted in the stomach a considerable time after the food has arrived there, and this may be one of the reasons why the conversion of starch continues after it has left the mouth.

Since medical science has thoroughly grasped the philosophy of digestion, it has been the aim by artificial means to supply the enzymes which digestion calls for when they do not appear to be present in a sufficient quantity or are secreted in less potent form by the digestive organs. Science has succeeded fairly well in supplying gastric and pancreatic ferments when nature lags behind; but our success has so far been only a very partial one in supplying starch-converting substances, and for this reason a new and seemingly valuable discovery in this direction at once becomes interesting.

That diastase has an identical action with ptyalin upon starch is a fact long known, and for this reason the diastase contained in malt has

been employed for this purpose. Diastase is contained to a lesser or greater extent in the different extracts of malt, and in minute quantities also in fermented malt preparations. In the latter the diastatic action, however, is generally totally destroyed by the acids present. Even in the best extract of malt there is only a limited and variable amount of diastase present; and while the extract of malt will continue to play an important role as a dietetic agent, its utility as a starch-converting agent will always remain a limited one. From time to time pure diastase has been offered to the profession, but none has so far proved of a sufficient potency to recommend itself to general use. Great progress in this direction is the discovery of Mr. Takamine, a chemist of no mean ability, who acted as one of the commissioners of Japan at the Cotton Exhibition in New Orleans several years ago. At that time he showed me an extract of malt, as manufactured in Japan, very rich in diastase and nutritive properties, and which I have mentioned in a paper on the diastatic and nutritive properties of malt extracts, published in the December number, 1891, of the Epitome of Medicine. In that paper I warned against too great heat in the manufacture of malt extracts, as heat impairs, and is even liable to totally destroy, the diastatic action. The avoiding of all undue heat in preparing diastase may be one of the reasons why the diastase, which is now manufactured by Parke, Davis & Co., under Mr. Takamine's discoveries, is so perfect in its action in converting starch into maltose and dextrose His product is a dry powder similar in appearance to some I received from a reputable German firm years ago, but is vastly superior in potency. Since the receipt of this German preparation I have frequently had occasion to experiment with various diastases, some being named vegetable ptyalin, but in no instance have they come up to the desired standard, and failed to fill the void felt for an enzyme which will accomplish what the enzyme of saliva in a healthy individual does accomplish.

In comparing notes of experiments lately conducted with taka diastase, other available diastases, and different extracts of malt, I find that the claim of the taka diastase that it will convert a hundred times its own weight of starch into a soluble state is well authenticated, for I have succeeded in converting even fifty per cent. more of starch than is claimed for it. Another point in favor of taka diastase above other similar products is the quickness of its action upon starch, for the action is almost instantaneous. To convert one hundred parts of starch into a soluble state by the action of one part of taka diastase, under proper conditions, it takes only four minutes until neither iodine test nor the microscope can detect unconverted starch. The product of converted starch with Mr. Takamine's taka diastase is to a great extent maltose. Compared with the time required by the best extract of malt to convert starch, this is certainly an excellent showing, for it took the best malt extract between seven and eight minutes to convert its own weight of starch into a soluble state, while with some other extracts of malt it took fifteen, twenty, and thirty minutes to partially accomplish this end. Tests with Fehling's solution to ascertain in the converted starch products the amount of contained sugar therein were equally favorable to taka diastase.

In converting starch into a soluble state by the action of diastase, the rearranging of the molecules of starch is understood to be as follows:

Starch ($C_{12}H_{20}O_{10}$) 10 plus water, H_2O, are first formed into erythro dextrose and maltose

($C_{12}H_{20}O_{10}$)9 and $C_{12}H_{22}O_{11}$.

By the continued action of diastase further hydration of the erythro-dextrose takes place.

The erythro-dextrose further splits up into erythro-dextrous-(B) and maltose, the ultimate result being a small amount of dextrin (anchro-dextrose) and eight or nine equivalents of maltose Since Leuch's discovery of the specific starch-converting property of saliva and its ptya-

line, we have lacked an agent of sufficient potency to accomplish what good healthy saliva does, and, for the first time, we find in taka diastase a substitute of undoubted worth, which, even in the presence of a minute quantity of acid, does not cease to be potent. The ptyaline in saliva is present there in a neutral or weak alkaline state, and for this reason it suggests itself that diastase, being an analogue with the former, acts also at its best in such a state, and is incompatible with acids. I employed in the greater number of my experiments with diastase carefully washed arrow-root—a perfectly bland and neutral starch; but I found that starches giving a slight acid reaction on blue litmus were equally well converted by taka diastase. In testing diastase as to its potency I would recommend that the iodine as well as the copper tests be employed, and that undue employment of heat under all circumstances should be guarded against, as heat, as already mentioned, destroys the action of diastase.

Taka diastase being a dry powder, tasteless and of no perceptible odor, can be given in very small bulk, and for this reason I think it will prove itself of value in infant feeding, where it is desirable to give starch-containing foods, provided said food would easily dissolve and the infant's saliva could be relied upon to perform that function. That the new diastase is destined to become a favorite with the profession I have no doubt, having acquainted myself with its potency in converting starch in a minimum of time into a form ready for absorption by the system, and I think it will be found the very remedy for which we have waited so long.

WATERLOGGING FROM ANESTHETICS.

"Dr. Joseph Price says that in his own work at present shock is simply unknown. What is sometimes called shock is simply waterlogging with an anesthetic." Commenting on this, the Denver Medical Times makes the rather surprising assertion that "men and women graduate from the best medical schools in the country and practice surgery, and yet never know how to give an anesthetic. A great deal of fuss is made about histology, microscopy, etc., and yet a student may attend three years in any one of the best medical colleges in the United States, and never receive one hour's practical experience in the giving of ether or chloroform. Even the internes in the hospitals are not instructed; they are simply allowed to suffocate, overpower and fight their way as best they can.

"The fact is the operator dare hardly to offer a suggestion, the anesthetiser is so extremely sensitive. As long as this condition of affairs continues there will be 'waterlogged patients dying from so-called shock.'"

And we add: There will be an immeasurable amount of suffering endured by the most innocent and interesting of our fellow-beings, merely because the great majority of their medical attendants have never learned practically how to employ anesthetics in labor; and because this class of patients and this alone think it their duty to be martyrized!—N. Y. Med. Times.

OYSTERS AND TYPHOID FEVER.

The Lyon Medical for August 18 publishes an article on this subject by M. J. Lavis, of Monte Carlo. The author states that when he began to practice in Naples he was struck with the number of gastric troubles which presented themselves, especially among newly arrived persons. These disorders varied in intensity, ranging from slight indispositions to violent attacks of gastro-enteritis. He was led to discover the cause of these attacks by observing that each time he and his wife had eaten oysters they were taken sick afterward. The symptoms were nausea, vomiting, dysenteric diarrhoea accompanied by characteristic colic of the large intestine, and tenesmus. These facts, says the author, led him to question his patient, among whom he found a number in whom the ingestion of oysters had been coincident with the beginning of the disease.

One of the most serious results as-

certained in these observations was that a certain proportion of the attacks of gastro-enteric catarrh was more or less rebellious to treatment, which was successful, however, in the majority of cases. The chronic cases were always accompanied by a degree of fever out of proportion to the local symptoms of simple catarrh, indicating the existence of an infection, or, at least, ptomaine poisoning. In the minority of cases, says M. Lavis, the typical typhoid fever of the Mediterranean developed. In other cases the symptoms of typhoid fever set in on the twelfth or the sixteenth day after the ingestion of the oysters, although no apparent derangement had manifested itself immediately after eating them.

With regard to the oyster itself, the author found that it was simply the passive vehicle of infection. Those consumed in Naples, and in Rome also, are found in different parts where there is no reason to suspect infection from human excreta. They are kept alive, however, in eelpots, which are sunk in the waters of the port of Santa Lucia, where they remain for weeks and even months. At a short distance from the port a large sewer empties its contents into the water, which is not very deep and almost stagnant. Consequently, says the author, when these oysters are eaten a certain amount of the infected water is taken into the system. This infectious matter contains bacilli of typhod fever and of cholera.

The variety of the morbid process, says the author, engendered by a food charged with the infectious matter of a sewer can not be explained except by the peculiar susceptibilities of each individual, and probably also by the variety of organisms that predominate at one time or another in the infectious matters.

The author states that he has often eaten oysters that were taken fresh from Lake Fusaro and Lake Lucrin and experienced no bad results. This shows, he thinks, that the oyster in itself is not the cause of the infection observed by him, but that it is caused by the polluted water in which it is kept.

It is only by the strictest supervision, he says, of the oyster depots in London, many of which are in a disgusting sanitary condition, also by the supervision of the water in which the oysters are kept, that we can prevent the abandonment of a food that is valuable alike for convalescents and the overtaxed brain. These observations apply also to all shell fish eaten raw.—N. Y. Med. Journal.

Surgery.

IN CHARGE OF
DR. T. H. MANLEY, New York.

ABDOMINAL HYSTERECTOMY—TECHNIQUE, CRITIQUE AND RESULTS.

BY M. GENTILHOMME, There de Paris, Annales de Medicine, 1 Aout, 1895.

This author divides his subjects into two classes, supra-vaginal and total ablation. In the first group he considers the extra-peritoneal method, intra-peritoneal and mixed. In the second, the vagino-abdominal, abdomino-vaginal and simple abdominal.

Supra-vaginal amputation he commences by the method extra-peritoneal. This, he claims, is one of the first, being employed by Kimball, in 1855, and Kreberle, in 1861, to remove a large fibroid. Hoeberle raised the fibroid after having first ligated the pedicle with two strong sutures.

Penn modified this plan; he detached the tumor in pieces and passed in the ligatures through the vertical planes.

Kleburg replaced the metallic suture by an elastic ligature.

These procedures have undergone further changes at the hands of Pozzi, Hegar and others.

The Procedure of "Hoberle-Hegar"—Antiseptic precautions are rigorously observed. Often the tumor is exposed, its interior wall is stripped and an elastic constrictor is applied. A sound is passed into the bladder, in order that this organ may not be injured. Now, the two hard ligaments are divided between two ligatures.

After having lifted out the tumor

we fix the pedicle at the base of the abdominal incision, two sutures only being employed for this purpose. Pozzi places several strong catgut sutures around the vessels and always freely fires the pedicle with the thermo-cautery before dropping it back, though some others are content to depend entirely on the styptic action of tannin to control oozing from the raw surface. The elastic ligature falls off about the fifteenth or twentieth day.

Modification by Katenback—Differs from the preceding, inasmuch as he directly carries his elastic suture through the centre of the stalk and ligates it in two sections. This answers admirably in those tumors which have thick pedicles.

Procedure of Moore and Kuster—These make a circular incision through the peritoneum, stripping it away from the growth and ligating the vessels separately.

The border of the capsule is sutured into the abdominal wound. In Kuster's plan drainage is maintained through the vagina.

Modification by Fowler—This author sutures the capsule of the tumor to the abdominal incision, having destroyed its interior with the thermo-cautery. The remnants of the growth are eliminated completely on about the thirtieth day. M. Gentilhomme speaks at length on the advantages and inconveniences of the extra-peritoneal method. which, he admits, gives the greatest protection against hemorrhage. The chances of infection, however, he believes, are great, suppuration, the sinking into the pelvis of the pedicle, with hernia or eventration. And for this, sometimes, when the pedicle is short, it is quite impracticable.

The intra-peritoneal method was first employed by Kimball, in 1852; Katenbach, in 1874, and Spencer Wells, in 1888. Wells proceeded in the following manner: He divided the tumor above a powerful clamp forceps, which compressed its base, closed in with great care all bleeding points and connected the stump with peritoneum. Schroeder and Czerny later perfected this meth- ed a septic and the cautery is employs this method, draining through the vagina by way of the vagina.

Baldy, of Philadelphia, with slight modification, employs this plan, though he always begins by first ligating the uterine vessels.

Olshausen, after having rolled the tumor out through the incision, applies an elastic ligature around the pedicle. Now, everything is rendered antiseptic and the cautery is employed, when the peritoneum is reflected back over the pedicle, the elastic and all buried together, the latter being left to encapsulate itself. This procedure has given rise to serious hemorrhage, infection and fistulas.

Schwartz, Zweifel and Chapu all proceed by ligating all vessels accessible before the tumor is divided; then peritoneal flaps are employed to cover the inside surface.

In fact, there seems almost no end to the various modifications which have been made in the intra-peritoneal method during the past ten years. Many of them are trivial and unimportant, such as would be adopted by any experienced, accomplished operator, while others are essentially on a similar principle, and only differ in technique.

VAST CICATRICIAL FORMATIONS IN THE VAULT OF THE BLADDER IN A FEMALE.

BY DR. E. LORNEAU.

The author reports a case of vesicular ulceration of unusual dimensions in a woman, who had been a long time suffering from all the agonies attendant on chronic cystitis. The patient was 47 years old, menstruated from the twelfth to the thirty-eighth year. She was married at 15. She menstruated regularly, without any serious inconvenience, except occasionally severe attacks of pain toward the end. At the age of 33, without any special cause, she commenced to suffer with vesical symptoms, having severe tenesmus, especially troublesome at night. At first she commenced to pass serosanguinolent urine; later, an admixture of pus appeared. In the mean-

time her general health began to suffer, her appetite failed and the demand for frequent urination made it impossible to secure continued sleep. Medicines had been tried and the mineral waters given; but all without avail; she continued to lose ground

After having suffered more than ten years and her debility became so great that she had to discontinue every description of labor and give up her home, she came under the care of M. Lorneau.

He found no signs of any organic disease, and, on a most thorough examination of the urine, failed to discover any tubercle bacilli or gonococci. Since albumen was present, intermixed with the pus, which was in great abundance, on bimanual palpation, there was a distinct induration made out over the fundus of the bladder. This was exceedingly sensitive.

The diagnosis of cystitis and pericystitis was made. Now, daily lavage of the bladder was made, at one time using boracic acid, alternating it with nitrate of silver, 1-30. After three weeks' treatment it was possible to make a cystoscopic examination.

This was painless and revealed an immense branching ulcer, which occupied the whole vault of the bladder, giving off branching furrows in various directions. This had now so cicatrized as to be nearly closed, at the same time so contracting the cavity of the bladder that it now held no more than one-third it did in the healthy state. The patient refused a supra-pubic cystotomy, which, it was presumed, would permit a direct cauterization of the part of the ulcer yet unhealed.

It was supposed by M. Lorneau that the primary cause of the extensive lesion was an infection through the urethra by the gonococcus. In time the germ had become imbedded in the sub-mucous tissue, and in this manner escaped expulsion with the urine.

Three months after admission she left, completely recovered, with no trace of her former difficulty.—Le Progres Med., Juillet, '95.

THE ROLE OF THE GONOCOCCUS IN BLENORRHAGIA.

BY M. POVANINE,
St. Petersburg.

The author examined 321 cases of blenorrhagia at the military hospital, the ages of patients ranging from 21 to 25 years. Staining was made with violet gentian. In two-thirds of the cases the gonococcus was present, and in one-third, absent. Blenorrhagia with the gonococcus is the most severe, the germ often remaining up to the fifth week. The diminution of the number of microbes points to defervescence of the disease. They persist longer when the bladder is involved or in neglected cases. External complications bear no constant relation to the quality of infection. Pus globules remain through the course of the disease, but during the last week they gradually diminish. Flat epithelia are a constant element and are in great quantity during the stage of recrudescence. Their appearance always indicates the deep penetration of inflammatory action and the intensity of the disease. Other microbes than the gonococcus are commonly present in all cases.

Blenorrhagia without the specific germ runs a mild course and usually terminates in two weeks.—Annales de Med., 23 Aout, '95.

THE SURGICAL TREATMENT OF BASEDORO'S DISEASE.

BY PROF. HEYDENREICH.

Medical agents having failed, we are to entertain the question as to whether surgery shall be invoked in those dangerous processes of exophthalmic goitre. Lister, Ollier, Tillaux and many others have successfully employed thyroidectomy. Hack, Frankel, Stokes and Bull have seen many recover after the thyroid body was removed.

According to Putnam's statistics, 71 cases, there were 83 per cent. recoveries after operation. If we admit that the primitive cause lies in such neurotic disturbances as lead to hypertrophy of the gland alone, then we can understand how its removal will lead to a cure. But, however we may regard its etiology, we should

not resort to extirpation of the gland until internal medication has been thoroughly tried. Kocher has had good results from ligating the thyroid arteries, and Tillaux advises a partial removal, at least, when there has been such compression as threatens suffocation.—Annales de Med., 29 Aout, 1895.

TRANSLATIONS FROM

Foreign Exchanges

By Drs. CHANDLER and DARIDOW.

TREATMENT OF PHTHISIS PULMONALIS WITH ICHTHYOL.

Dr. L. Guido Scorpa, of Turin.

In spite of the numerous uses of ichthyol in internal medicine, it has had but little employment in diseases of the chest.

The antiseptic properties of ichthyol, which are particularly potent on the streptococcus and on the bacillus of diphtheria, render it of great value. It may be taken for years in doses of 5 to 8 grams daily, without causing disagreeable symptoms. From the total number of patients suffering from phthisis who have been treated by me with ichthyol, I prefer now to consider the cases of 150, who have been under my care for a long time and therefore allow a more unbiased opinion as to the efficacy of the treatment. After some experimenting, I decided in favor of the sulpho-ichthyolate of ammonium as being the best preparation of the drug and have used it exclusively. I used a 1:3 solution in oil of peppermint, which covered the disagreeable odor of the drug.

Of this 1:3 solution, I gave 20-180-200 drops in the course of the day in considerable water (one pint), to be drunk a swallow at a time.

I usually commenced with the smallest dose and increased it gradually by 10 drops every two to four days, according to the patient, up to the maximum dose of 180 to 200 drops.

Aside from a nourishing diet (with or without cod liver oil) and plenty of fresh air, disinfection of the sputa and a careful regulating of the bowels, no other drugs were used. Of course, in severe cases, the appearance of sweats, fever, pain, etc., called for the appropriate treatment. Of my 150 cases, 110 belonged to the infiltrated and 40 to the destructive form of the disease.

The results of the treatment are as follows: After a very few days (five to twelve) there was a diminution of the cough, an improvement in the character of the expectoration and an abatement of the dyspnea.

Concomitant with, or slightly after, this period, the night sweats and fever decreased and disappeared altogether; the fever becoming first remittent, then intermittent, and finally taking its departure.

Now, the general improvement becomes more marked, the appetite increases, the digestion improves and there is also an increase in the general strength, and this continues up to a point which may be designated as apparent clinical cure and has been arrived at by seventeen of my patients who came first under treatment.

In 57 cases the sputa could be examined before, during and after treatment.

In thirteen cases there was a complete disappearance of the bacilli, and in the others a very marked decrease in their number.

In the just mentioned thirteen cases the purulent sputa became first slimy and then disappeared altogether.

In all cases, with the exception of 23, in which the disease was so far advanced when it came under treatment as to preclude all possibility of a cure, there has been an improvement under treatment.

In 17 cases we may consider a cure to have been accomplished; in 50, a very great improvement in general and local symptoms; in 32, a marked improvement, although not so much so as the proceding; finally, in 28 cases there has been no perceptible change.

This last number includes those who have been but a few months under treatment, and therefore a change for improvement is not wholly out of the question.

An examination of the urine was

made in 21 cases only. There was an invariable lessening of the nitrogenous and sulphurous elements and an increase in the coloring matters. It was clear acid, without any marked sediment, sp. gr. 1021-1026, and contained no trace of albumen or sugar.

The body weight had a more or less constant increase; in one case 2 1-2 kg. in a fortnight in a rather decrepit patient.

Finally, and of great importance, was the absence of any dangerous or unpleasant action of ichthyol upon the heart.

Dr. Bogdanik, of Biala, writes in the Przeglad Lekarski, No. 22, 1895: A ten-days old child died 48 hours after circumcision. The nurse put on a dressing with 5 per cent. carbolic acid and noticed upon changing it that the bandage was colored black. On the morning of the second day after the operation, the child was cyanotic, and the physician who was called in noticed a dark violet discoloration of the skin and mucous membranes, and also that the urine was of a pronounced greenish tinge. The child died in a couple of hours, with temperature 40 degrees C., clonic cramps in hands and feet, partial trismus and great restlessness.

A post-mortem resulted in the verdict of poisoning by a carbolic acid dressing.

Dr. Gustav Beck (Prager Med. Wochens, No. 32), describes a case of pregnancy with unruptured hymen as follows: "As the number of known cases of this is extremely limited (29 in all), I take the liberty of describing such a case.

"Marie F., wife of a china painter, came to my clinic on October 25, 1893, and made the following statements: She had menstruated regularly every four weeks since her eighteenth year. Amount of blood lost was slight, with moderate pain in lower abdominal region. Duration, three days.

"Married three years without children or abortions. Last menstruation, nine weeks previous; since then a feeling of weight in the genitals and legs when standing or walking.

"Status was, woman of medium size, well nourished, lung and heart sounds normal, the breasts rich in glands, which give a drop of fluid upon pressure. Abdomen flat, linea alba slightly pigmented.

"Vulva and labia normal. The introitus vaginae was closed by a membrane which was pierced in its lower portion by an opening, which allowed only the passage of the point of a sound, and therefore permitted only a rectal examination. This gave a soft uterus, corresponding in size with one in the third month of pregnancy.

"The diagnosis was "pregnancy with imperforate hymen." The woman would not acquiesce in this and made the following additional statements: After marriage, her husband, a consumptive, had tried in vain to accomplish coitus according to Hoyle, but, as he brought on a hemorrhage of the lungs by his exertions, his physician forbade him sexually overexerting himself, and since then he had never tried an immissio penis, but in sexual intercourse merely placed it between the labiae.

"The birth of the child took place on the 10th of May, 1894, and as the membrane would not yield before the advancing head, it was divided by two cuts and delivery followed without trouble."

Dr. Adolf Havas, in Wiener Klin. Rundschau, gives the following treatment of bubos:

First, empty the pus through a cut one inch in length, then inject 1 to 2 c.c. of a 1 per cent. solution of argent. nitrat. into the abscess cavity. Change the dressing every two days, wash the edges of the wound with a solution of corrosive sublimate, 1 per cent., and inject the silver solution once more. The next day, the pus formation ceases, the livid color disappears in from two to three days, the connective tissue unites, the pain vanishes and the cure is accomplished in seven or eight days.

Polgar (Archiv. f. Gynaek, xlix,

H. I:) notes six cases of puerperal osteomalachia, and one case in a 22-year-old virgo, which was cured by castration. Four had lived in damp dwellings. Dilation of the veins and hyperemia of the uterine appendages, as described by Fehling, could be demonstrated in only two cases. All the patients had been under treatment with internal medication before coming to Polgar. The author therefore draws the conclusion that there is at present no form of treatment so effective in these cases as castration, which is indicated in all severe forms of softening of the bones.

Speaking of castration, brings to mind a case once shown by Dr. Freund, of Strasburg, who said that since the operation, the patient, instead of losing her sexual appetite, had found that it had markedly increased, much to the disgust of her 65-year-old husband.

OFFICIAL REPORT FROM THE IMPERIAL GERMAN HEALTH DEPARTMENT.

From the Kaiserliches Gesundheitsamt in Berlin comes the report of the results of the Collective Investigation of Diphtheria Antitoxin for the first quarter (January to April) of the year 1895. Recognizing the fact that the statistics at the disposal of many of the individual investigators have been but small, and realizing the importance of obtaining figures sufficiently large to eleminate the various accidental and subsidiary factors, the Chancellor of the Empire and the Reichstag have ararranged that the reports of the various hospitals should be sent to Gesundheitsamt and there be collated and tabulated. In compliance therewith there have been received for the first quarter of the year 1895, up to the date of June 20, 2228 replies from 232 physicians in 191 hospitals. In 1148 of these cases the diagnosis was confirmed by bacteriological examination.

Of the 2228 cases treated, 1805-81.0 per cent. recovered, and 386-17.3 per cent. died. In 37 cases, 1.7 per cent., the issue of the disease was not known at the time that the return was made. The mortality of 17.3 per cent. must be characterized as a very low one, since it includes all the complicated cases, and even those that were moribund on admission to the hospitals.

The ordinary diphtheria mortality, according to hospital statistics, is on the average 50 per cent., and the results may fairly be called favorable ones. The previous statistics of cases treated with the serum give similar figures. Heubner collected from a number of hospitals to the end of January, 1895, 3036 cases, mortality 20.6 per cent.; Baginsky treated 525, mortality 15.6 per cent., and Monti tabulated 3888 cases, mortality 18.4 per cent.

Grouped according to severity, the following is the result in the 2228 cases reported on:

Of mild cases there were 749 (33.6 per cent.), of which there recovered 743 (99.2 per cent.).

Of medium cases there were 336 15.1 per cent.), of which there recovered 322 (95.8 per cent.).

Of severe cases there were 1076 (48.3 per cent.), of which there recovered 722 (67.1 per cent.).

Of indefinite cases there were 67 (3.0 per cent.), of which there recovered 53 (79.1 per cent.).

As regards the influence of the serum on the general clinical course of the disease the report agrees thoroughly with Professor Baginsky, and cites his words. The phenomena of the disease and its complications were of the usual nature; but they were favorably modified as regards their severity. The entire course of the disease under the serum treatment was a quieter and milder one; and the return to a normal condition was quicker than usual. The nature of the process was not changed; but its effect on the general organism was much milder.

The influence of the remedy on the local phenomena in the pharyngeal organs is an unmistakable one, as has been proven by earlier publica-

tions. According to Heubner the local malady in cases not treated with the serum most commonly gets well at the eighth day; in cases treated with the antitoxin it occurs at the sixth day. The exfoliation of the membrane is frequently complete by the fourth or fifth day. The present statistics prove the same thing. In a large number of cases the following is noted: "Membranes began to come away on the third or fourth day;" "on the fourth or fifth day the pharynx was entirely clear." In connection with this disappearance of the membrane a rapid decrease in the size of the cervical lymphatic glands was frequently noticed.

Abscesses occurred at the site of the injection in 13 cases. With care and cleanliness they could probably be always avoided. As is well known, Trikresol is added to the serum for the purpose of not only destroying any germs that may have reached it through the air, but also of rendering innocuous any infectious material from the animal itself. And before the antitoxin is put upon the market it is subjected to a Government examination, more especially as regards its innocuousness. The danger of an accidental inflammation at the seat of the injection is therefore less, in spite of the large quantities of fluid employed, than is the case with the ordinary hypodermatic injections, such as those of morphine.

Finally, the report concludes, our statistics confirm the reports that have been received from all sides, that the diphtheria antitoxin is harmless. This fact, with the favorable mortality under its use, should encourage its further application.

Miscellany.

BLOOD ALTERATIONS UNDER ETHER.

The inhalation of ether produces a marked diminution of the red corpuscles in the blood, especially in the anemic; the effect on the hemoglobin is most marked. The leucocytes are markedly affected in their amoeboid movements.

Pneumonia succeeding ether anesthesia is produced by the chilling effects of the inhaled vapor. Oedema of the lungs may follow, in consequence of the action of the anesthetic, including intense congestion in the veins and capillaries, leading to ultimate stagnation and effusion. Nephritis is provoked by the action of the chilled blood on the renal parenchyma.

Prolonged anesthesia most profoundly deteriorates the blood and greatly retards recovery to health. —Revue Des Sciences Med. Path. Int., 15, Juillet '95, p. 232.

Noble Smith, British Med. Jour., Dec., '94., reports a case of spinal disease attended with paralysis of the lower limbs, and hyperaesthesia of the abdominal areas promptly relieved by a laminectomy of the tenth dorsal vertebra. He found a mass of granulative tissue compressing the cord. This was removed. On the second day after the operation sensation of cold was felt in the feet. Improvement continued and in three months recovery was so complete that the full power of locomotion had returned.

COCAINE IN SURGERY.

Reches again calls attention to the use of cocaine, and it appears is the only French surgeon who generally employs it to the exclusion of other anesthetics. He has employed it now in 3200 operations, with remarkable success. He describes with minutiae all the details so necessary to observe in its use to secure satisfactory results. He always limits the strength of the solution to one per cent., and makes multiple punctures, when using it hypodermically. He advises against its adoption in those suffering from hysteria or heart disease.—Revue Des Sciences Med., 15 Julliet, '95.

The Times and Register.

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ROYAL COLLEGE OF SURGEONS OF ENGLAND
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THE OPERATIVE PRINCIPLES OF MEDICAL AND BIOLOGICAL SCIENCE.

BY W. R. DUNHAM, M. D., KEENE, N. H.

It may seem uncalled for in this age of scientific culture to go back and review the subject of what may constitute the operative or active principles of medical and biological science.

So far as human authority has expressed itself, this question was settled at a period many centuries before our day.

Thus at the present time the general expectancy is that the advancement of medical science must come largely from more carefully conducted experiments rather than from a better conducted system of thought.

From an article published, from the pen of Dr. James W. Keiser, of Reading, Pa., entitled "The Right to Question Authorities, and the Value of Medical Testimony," I quote as follows: "The lesson I wish to inculcate is that we must not too blindly worship authority; that we must reserve the right to question and weigh any proposition, no matter how strongly it be intrenched by great names. Even were all authorities agreed, their opinions are not final, as we know that twenty years will work such havoc with our present knowledge and opinions that the books on our shelves to-day will be then only historical memorials of the past. All future progress and revolutions in medicine will be largely made by sacrificing our present authorities. The history of the past admirably illustrates the need of such a stand. There are startling instances in science and medicine where a mad infatuation for the sacredness of the opinions of great men has stopped the wheels of progress and perpetuated great errors."

With this precedent, persuading to the conviction that we are all equally entitled to think for ourselves, I trust you will pardon me for stepping out of the rut, and calling attention to the existing situation relative to the accepted operative principles of this department.

It will be found that Pliny, the elder, who was born A. D., 23, as history affirms, stated that Acron was the first person to apply philosophical reason to the department of medical and biological science.

It was this person, so far as can be determined from historical record, who first gave interpretation as to what kind of function constituted the operative principles of medical and biological science. Therefore, we can say with some assurance of being correct, that as early as the first century A. D. the human mind gave interpretation to what was then presumed to be the operative principles of this department.

Should you inquire what changes have been made, what ideas have been eliminated, and what new ideas have been accepted in substitute as an improvement on this early interpretation, I should be obliged to say that history fails to furnish a record that any ideal change has ever been made relative to the accepted operative principles of medical and biological science.

We will now consider what con-

*Read before the Cheshire County, N. H., Medical Society, October, 1895.

stituted those doctrines of first principles, accepted some 1700 years ago, that have been perpetuated and are now taught in the schools of our generation.

In accordance with this early interpretation, we are required to accept in the name of science that three kinds of forces, three kinds of active principles, three kinds of operative principles take part in the presentation of that phenomena presented by the living human organism.

First, we mention the active vital principle—that life agency that is alleged to construct the human organism and present the conditions of health.

The second division of active principle is alleged to exist in association with the cause of disease, and said to act and thus produce disease. Including the relations of poisons that are said to act so violently as to cause death. With this second department of active principle that has done so much injury to the human family it is not alleged in medical literature that such is a life agency, but some mysterious agency of nature which existence is recognized from the function it has seemed to fulfill.

The third department of active principle is recognized as being an agency in assocation with material medicine, called the "active medical principle," alleged to act to produce medicinal effects.

This constitutes the accepted operative plan, taught in our medical schools. As a modern idea, the question comes up—is this plan correct?

Is this nature's plan, or is it only a human invention, while nature is operating from an entirely different plan?

This accepted plan has afforded satisfaction for many centuries, and to now question its validity may seem like offering censure to the dignity of intellectual achievements.

Again, alluding to the three departments of active principles, you all know that many volumes have been written respecting the function of the "active cause of disease;" that is, in description of what this mysterious agency or active principle has done in the name of disease. Also that much has been written of the utility of the practical function of "active medical principle," while relative to the department of active vital principle so little has been written on the subject that a few quotations will reveal the degree of success achieved in this direction.

That celebrated English writer, Henry Maudsley, M. D., F. R., C. P., states in his book on "Body and Mind," essay on "Theory of Vitality," page 240, as follows:

"It is extremely unphilosophical in the present condition of knowledge to refuse to accept vitality as a special manifestation of force, and whatever its real nature may be, vital force should be received as a distinct force on the same terms as chemical force or electrical force." From the same page I also quote: "It is easy to perceive how impossible it is in the present state of science to come to any positive conclusion with regard to the nature of vital force."

On page 234, when alluding to the difficulty in comprehending the nature of the vital force agency, this writer states: "It may be that this generation and generations to come will have passed to their everlasting rest before a discovery of the secret of vital activity is made."

It is not claimed that the alleged vital force agency is an imaginary agency. But the accepted conclusion is that this problem must await the advent of future generations for a solution.

The acknowledged leaders have persuaded the medical profession and non-professional public to accept that the function of vital force is an unknowable department of nature.

And within ten weeks I have received a letter from a distinguished medical editor, who states that the human organism is "put into activity by that unknowable force we call life."

No writer has made it plain how to distinguish an activity set in motion by the vital force from an activity set in motion by the "active cause of disease." While I shall claim that

all activities presented by the living human organism are presented by the vital force agency.

Also, I shall claim that the alleged functions or operations, recognized as being presented by the "active cause of disease" and the "active medical principle" to exist only as imaginary departments of nature. Both imaginary and acceptable simply because the function of vital force is not understood.

The nature and function of vital force is not a difficult problem to comprehend. Every person in this room can comprehend this postponed problem with all that equal satisfaction and positive verification which supports the acceptance that the shape of the earth is spherical.

The key to this problem is found in the fact and recognition that vital force is not a one function of active principle, performing a variety of duties, but is a four distinct method of function of operative active vital principles, performing a variety of duties.

This distinction must be recognized, and this alleged fact may be easily verified.

And when we seek to determine the existing distinction of the four functions of alleged ultimate active vital properties, each performing and executing a function of life peculiar to itself we shall be rewarded with success, and will then be in possession of that key which unlocks the unsolved problems of centuries, as presented by the human organism in conditions of disease.

So small a factor as failing to determine that the shape of all planetary orbits were elliptical, rather than circular, as first presumed, postponed the solution of many astronomical problems for more than a century, while failing to recognize that vital force is an agency of nature manifested in four distinct life functions has ever been seriously detrimental to intellectual pursuits and scientific achievement.

Also, such failure, as previously stated, has occasioned the human mind to accept the existence of external agencies in the name of "active cause of disease" and "active medical principle."

We can start off with the undisputed fact that there is a vital force agency, but will facts of recognition enable us to distinguish four distinct ultimate active vital properties, each department executing a function peculiar to itself?

As students of biological science we must claim the right to use special terms to express special operative principles, and I will thus claim that privilege in the use of the words sensibility, instinct, sensation and contractility, as representing the four distinct vital properties, and next proceed to define what constitute the functions represented by such terms.

I shall apply the term sensibility to that life function which expresses intelligence. It is both a life function and a mind function, and is that function which relates us to the external world.

It superintends all the voluntary acts. It has the ability to originate ideas, to think, to experience joy, hope, grief, anger and exercise reason; also, experience a multitude of emotions.

Instinct is an involuntary life function but not a mind function, as is often represented. Instinct superintends the involuntary acts—superintends the construction and repair of the organic body

Sensibility superintends the supply of nutrient material, while instinct takes charge of the placing of such material for the purpose of organic growth.

Sensibility superintends voluntary acts.

Instinct superintends involuntary acts.

Instinct is the life property that takes charge of all material that is introduced within the human organism, using the nutrient and directing the method for expelling the foreign.

Instinct is a life property that pervades the whole organism, while sensibility is a life and mind property of the brain.

Instinct is a life property ever at work, while sensibility has alternate periods of rest and activity. Sleep is

a complete temporary suspenson of the function of sensibility.

Instinct is not intelligence. It is not a function that can reason. It may do things for the best interest of our organisms in its normal function or it may do the extreme opposite, in its abnormal function. In conditions of disease it is this life property which requires to be watched and guided.

It is the abnormal function of this life property that largely engages the attention of the physician in conditions of disease.

Instinct may correct some of the errors of sensibility. That is, a person may voluntarily swallow certain objectionable material, which instinct involuntarily expels by an act of emesis, and sensibility can to a limited degree indirectly guide the function of instinct.

With this partial definition of the distinction between the functions of the two vital properties mentioned, there is to be determined whether such distinctions really exist or, is this representation merely a flight of fancy and without practical importance to consider?

If such difference means anything it means there is a special duty delegated to each life property.

In the use of the term instinct to represent a special involuntary life function it is important that we do not use this term to represent both voluntary and involuntary life functions, as is the custom in all literature.

The dictionaries define instinct as both a voluntary and involuntary life function—innate intelligence of animals is called instinct. The voluntary act of the beaver in building his dam is called instinct, while, as a scientific fact, it is the instinct life function which constructs the beaver.

Biological science is not a crude department of nature that may be represented without special regard for well-defined terms. In fact, finer distinctions of operative principles are implied than with other departments of science.

We will next consider that life function called sensation. This is not a mind function, as is frequently represented, but a life function; and, while this term can represent correctly but one special life function, the same liberty has been taken with this word as with instinct.

It is used to represent two distinct life functions in its general application, and is so defined in the dictionaries.

Sensation is an ultimate life property, executing a different function from either of the two life properties already defined.

Sensibility relates us to the external world, while sensation is a life property that relates us to the contact world. It is a life function manifested from relations of contact.

Sensation is not a brain function or mind function, that may express emotions like the factors of sensibility. The factors of the function of sensation are represented in the words taste, smell, heat, cold, smarting, itching, weariness, hunger, thirst and pain of various degrees.

The total of the factors of sensation are innumerable; equally so as are ideas. Pain and ideas are factors of different life properties.

Sensation is a life function designed for the purpose of enabling both the sensibility and instinct to become aware of existing contact relations. The function sensation speaks its own peculiar language to both sensibility and instinct relative to existing contact relations that may require attention from either instinct or sensibility, for the purpose of self-preservation.

It is not possible to do justice to the mention of the function of sensation in this essay. My desire is to call attention to the difference of function of existing life properties of active principles.

Among the distinctions, even with the function of sensation, we are required to recognize the fact that some sensations may relate to both sensibility and instinct; some sensations may relate only to sensibility, while others may relate only to instinct.

Now, while it is true that sensations are produced by contact relations, there is something more that

is true. Sensibility, to a limited extent, can both develop and abolish certain sensations.

Also, mental and physical labor may develop certain sensations, all of which facts, however, do not infringe on that other fact—that sensations are largely produced by contact relations.

Sensation is a life function of great diversity of relation and great importance to recognize.

We will now take up the subject of that life property called contractility.

This is the animal strength property manifested by the muscles. It is the life property of motion. This life property is not primarily active in itself, but is used by other life properties.

The sensibility uses this life property to execute voluntary motion, while instinct uses this vital property for the exercise of involuntary acts. Thus we might say that contractility is a special life property of motion and strength used by both the sensibility and instinct.

With such association of application there is a very nice distinction of importance to recognize. The sensibility exercises voluntary contractility from an impulse of the will. The instinct exercises involuntary contractility as a sequence of an existing sensation that is produced by contact relations.

Thus we are able to a limited degree to harness up and use the involuntary life function as we may desire, by the causing of special sensations from contacts, and we use material medicine to make contacts to cause such special sensations.

I have partially defined the alleged functions of the four active vital properties as each exercising a function peculiar to itself. Now I ask, shall we ignore such self-evident functions as here represented and say they are of little or no value, and no part of the operative principles of biological science?

Can we determine the function of each ultimate life property and still claim that the function of vital force executes a mission not included in the aggregate of such functions?

Can you discover any life act not presented by one or more of the special life properties mentioned?

If not, we must accept that the function of vital force is solved, and thus manifested in the exercise of those four special divisions of life operations, susceptible of comprehension as life acts.

In other words, all that vital force executes is done in the name of those four special life functions.

There is another question to come up, as to whether there are any operative principles, any active principles in medical science different from the operative or active principles of biological science?

In other words, is the alleged "active cause of disease" and "active medical principle" a different operative principle from what has been represented in the functions, normal or abnormal, of the four active vital properties?

We shall soon get to this subject. It may be well, however, to distinguish that, while nature has provided no department entitled to the name of medical science, there is provided, however, that medical practice may be made operative from a basis of positive scientific principles. That is, in other words, we may practice medicine scientifically.

Provided we accept the operations of such functions, as here defined, it will be of interest to examine more or less into the methods of co-operation implied in the voluntary and involuntary activities of such life properties. Thus, I repeat, that sensibility superintends the voluntary, while instinct superintends the involuntary.

The voluntary is set in motion in response to the will, while the involuntary is set in motion in response to a sensation.

Thus, in the fact that we can cause sensations by making contacts, it then becomes true that we can harness up and use the involuntary vital force, to a limited extent, for the exercise of certain operations, as we may think best to have established in conditions of disease; and in this illustration I shall make application

of the operative principles to the disease problem.

It will first be important to recognize that each vital property may present its function, either as a normal or abnormal activity.

The sensibility may become insane. The instinct may construct malignant growth. Sensation may present persistent disagreeable feelings and irritability, and the contractility may be exercised with convulsive actions to the extent of exhaustion and death.

The involuntary organism when surrounded by conditions which produce normal sensations exercises physiological actions that maintain health.

When surrounded by causes which produce abnormal sensations there is exercised a pathological vital action that in itself constitutes active disease.

Instinct directs both physiological and pathological activities, as a sequence to a previous existing sensation, either normal or abnormal.

Thus it will be recognized that disease begins with an abnormal sensation. This constitutes an important fact. The cause of disease does not act—it has no active principle. Thus the phrase, "active cause of disease" is a misnomer. The cause is passive, but its presence causes abnormal sensation, to be succeeded by pathological vital action, which is active disease.

(To be Continued.)

RATIONAL TREATMENT OF PERTUSSIS.

BY FRANCIS T. B. FEST, M. D.,
PLANK ROAD, MICH.

With every disease its etiology shows us the way for its treatment. Therefore, it is necessary to recapulate the etiology of every disease for which we wish to outline the therapeutics.

Pertussis, or whooping cough, is a contagious disease, which manifests itself in spasmodic cough. Although some bacteriologists have found in the sputum bacilli, we are unable so far to determine their role, whether causing, accompanying or only accidental. It is a local disease of the larynx, acting upon the nerve supply, and causing spasms of this organ. The course of the disease shows three distinct phases—the catarrhal, paroyxsmal and declining.

From the Journal of the American Medical Association, August 17, 1895.

The first stage shows only symptoms of mild catarrh of the bronchi, nose or conjunctiva. Pathognostic for pertussis is only the excessive watery secretion from the affected regions. This phase lasts from two to seven weeks, with infants often a few days only.

The paroxysmal stage affirms the diagnosis by its characteristic "whoops." The expectoration is watery, sometimes bloody. In many cases vomiting follows the paroxysms by mechanical irritation. The vomiting in return can cause disorders of the digestive apparatus. The whoops at times occur as often as every half hour, and as thereby the cyanotic condition which accompanies the whoops occurs too frequently, they lead to asphyxial convulsion and even death.

In the respiratory apparatus the irritation causes in many instances capillary bronchitis and catarrhal pneumonia. After duration up to ten weeks the paroxysms are less severe, show themselves more rarely and the disease goes over into the declining stage. At this time the sequela or secondary lesions mainly demand our attention.

As we have seen, the disease is a local one. It primarily affects only the larynx; all other symptoms are secondary. The circumstance forms the basis of our treatment. The disease is local—ergo, we treat it locally; it is of neurotic character—ergo, we give a drug that acts upon the nerves.

With contagious local diseases rational local treatment consists in destruction of the contagion by antiseptics—the most powerful is the most rational. Therefore, every local application of any antiseptic improves to a certain degree pertussis. If we cast a glance at the literature, nearly everything was tried—phenol, boracic acid, thymol, resorcin, naphthalin, creasote, benzol, bromoform,

mercurials, etc., but they all more or less are of irritating action upon the surface they are brought in contact with, or if not irritating, their action is so mild that their therapeutic effect is as mild, too. The experience of the last few years proved the superiority of peroxide of hydrogen over all other antiseptics, except when we have to handle metallic instruments. An exception which interferes not in pertussis.

In pertussis I used the peroxide with great success for local applications in this way: The child's head is leaned backward and held firmly, another person pulls out and depresses the tongue to bring the glottis into good view; then, by means of a bulb atomizer, consisting of glass and rubber only, I direct a spray of peroxide of hydrogen solution toward the larynx, and if possible, through the glottis. This is much facilitated if the child is old enough to pronounce the sound a.

I always prefer the 30-volume peroxide of hydrogen (hydrozone), and dilute it in the following manner—hydrozone, one part; distilled water, ten parts; glycerine, one and one-half parts.

If the parents are docile they can be instructed to repeat the application twice or thrice a day. If the physician has a chance to apply it himself, he does well to make the solution fresh every time. At all events, it should be made fresh every other day, on account of this mixture being unstable.

Of all drugs only one has a really aborting influence upon pertussis, the old reliable, often-abolished and always-restored belladonna. The only secret of its right administration is the circumstance that we have to give such doses to get the belladonna action, the flushes (Jacobi), otherwise the administration is without value.

A child of 2 years requires six drops of the tincture three times a day; with the age the dose has to be increased to the proportion of 1.00 as a maximum single dose for an adult (gtt. xxv).

The root, the extractum alcoholicum fluidum, can be given to infants of six to eight months in doses of 0.01 t. i. d.; children of 3 to 4 years require of the same 0.3. Atropin may take the place of belladonna, beginning in a child of 2 years with 0.00065 t. i. d. and increase proportionately.

All complications must be abated in time, else our patient will be emaciated. If vomiting occurs at the paroxysms give menthol. If there be gastritis and catarrh of the bowels, give calomel, bismuth or, still better, glycozone. Often we meet gastralgia; then I prescribe for a child over 2 years:

R—Belladonna, tinct., 2.00.
Mentholis, 2.50.
Spir. frumenti, 10.00.
Glycerin, 20.00.

M. D. S. Teaspoonful every two hours.

Glycozone administered in the proportion of two teaspoonfuls, diluted in a wineglassful of water, gave me the most gratifying results in acute cases.

Are the paroxysms severe, we can easily control the spasms by an application of cocaine to the larynx.

For the general treatment we shall advise fresh air, good nourishment, tonics and inhalations of ozone. With such treatment the disease can be cut off to a period of only a few weeks.

A PRACTICAL STUDY OF THE BLOOD AND THE CIRCULATION, WITH A HISTORICAL REVIEW OF THE SUBJECT AND ITS BRIEF CONSIDERATION FROM THE STANDPOINT OF ITS CLINICAL COMPOSITION, ANATOMICAL STRUCTURE, AND PHYSIOLOGY; INCLUDING CLINICAL STUDIES, AND EXPERIMENTAL RESEARCH ON THE LOWER ANIMAL.

BY THOMAS H. MANLEY, M. D., NEW YORK.

Continued from last number.

PART IV.

THE INFLUENCE OF THE ARTERIES IN MOVING THE BLOOD CURRENT.

To anyone conversant with the

many singular features which the living arteries present, the role which they play in propelling the blood, their tremendous energy, and yet their docile submission to the intervention of art, in accident or disease, any scientific inquiry bearing on their vital character becomes a subject of liveliest interest.

The arteries are highly endowed with remarkable and various characteristics, both in structure and function, which have engaged the serious study of the most eminent scientists of every age, though, for want of instruments of precision, no substantial advances were made in our knowledge of their minute anatomy until within the past two centuries.

In physical conformation the arterial tree is nothing more than a series of tubes, running into infinitesimal ramifications, a vast and almost endless number of conduits, extending in every direction; the blood moving in them, in obedience to the same laws as apply to hydraulics; superadded to which is that influence which imparts to them their vital properties.

Anatomically, they are made up of elastic substance, invested externally by areolar tissues and internally by endothelia; nourished on their periphery by the vaso-vasorum, and animated by the vaso-motor nerves from the sympathetic system.

In the aortic root, yellow, elastic, fibrous tissue is intimately interwoven with the contractile fibres.

Anatomists are not fully agreed whether their general contractile investment should be regarded as muscular tissue or rather a species of the fibrous variety.

Modern histologists designate it the "muscularis;" but in function its resemblance to fibrous connective tissue is much greater than to muscular. Nor will the microscope definitely settle the question; because, the protoplasmic corpuscles of these tissues possess such similar characters and arrangement that their differentiation must be rather decided on arbitrary premises than irrefutable proof. Fortunately, from a practical standpoint it is quite immaterial which structure predominates.

The right ventricle sends a jet of blood into the pulmonary artery, the tricuspid valve closes and now the vessel contracts on its distended contents and delivers them to the pulmonary capillaries. Now, what precise part the arteries play from this point through those organs, such active centres of profound chemical and vital changes as the lungs, is an interesting problem. But when we advance a step further to the left ventricle, where the systemic circulation begins, the controversy opens. Volumes have been written on this phase of the subject, and the greatest minds have been concentrated in trying to solve the problem. Magendie, the unrivaled French physiologist, denied that the arteries served as anything more than simple tubes to convey the blood, alleging that the entire vascular circuit was maintained by the heart alone. His eminent contemporary, Poisseulle, and others since, have shared the same view. In support of his position Magendie made many experiments on the living animals and devised a mechanical contrivance to demonstrate his position. It has been the opinion of many, however, that this physiologist inferred too much from the supposed analogy between physical phenomena and vital properties, and later investigators have quite conclusively proven that not a few of his deductions rested on fallacious conclusions; that he sometimes seemed to have lost sight of the fact that all vital actions are regulated by laws, delicately and finely adjusted. His experiments were made on terrorized animals before the discovery of anesthesia; besides, unlike Hunter, or Laennec or Bichat, he was not a practitioner, and hence was not in a position to confirm by observation on the human body those theories, the offspring of experimentation. Holland questions the possibility of the heart extending its energy through the four series of capillaries, as is the case in the liver, before the blood reaches the cava. Barry believed that the venous circulation depended entirely on the respiration, and Bichat

looked upon the capillaries as those agents specially concerned in moving the blood. Others seemed to have looked upon the corpuscles of the blood itself as elements imparting to the vessels and the economy renewed energy, and effecting such changes as render the continuous motion of the blood possible. I have myself made no effort to determine by experimentation yet just what share the larger arteries take in the circulation and, therefore, consider it unnecessary to refer to the latest views of our modern physiologists on this subject; and will be content with making a few observations on the practical side of it.

THE RESISTANCE OF THE ARTERIES.

Many complex and singular problems confront us when we come to calculate the approximate resistance of the arteries, and here we soon discover that the laws of physical science have but a limited application. As an illustration, let us compare the arteries with a system of pipes conveying water through a large building. Here, we will observe, that at the source, at the main, but one tube, of large dimensions, is employed, and from this the stream is broken, perhaps, in a hundred or more places, for distribution; the water rising, in proportion to pressure, atmospheric, hydrostatic or such as may be added as an auxiliary through an artificial lift.

Now we will notice that in those tubes the farther removed from the source and the higher elevated the less the pressure; in the smaller ones with the same degree of pressure the greater will be the velocity of the current. In the systemic arteries we may note the contrast; with those arteries far removed from the heart, as the palmar or plantar-arch, or ramifications of the cerebral arteries, in the substance of the brain. From a practical standpoint we know well that arterial hemorrhage in any of those three-named situations is more energetic and more difficult to arrest than in the mammary vessels on the left side immediately over the heart, or the axillary, in close proximity. And, further, instead of the blood current gathering accelerated motion as it enters the arterioles and capillaries, it markedly slackens, as in the large vessels it is a rushing torrent, while in the capillaries its movements are comparatively gradual and may be easily studied. A puncture or fissue of a metallic tube no amount of time will close in; on the contrary, will rather enlarge it. In many of the intermediate arteries, when we encounter a small laceration or leak, instead of endeavoring to seal the opening we boldly cut the vessel in two, thereby securing an immediate arrest of the bleeding.

There are various phenomena associated with the arteries, which would be quite inexplicable if our sources of knowledge were limited to the physical science, and if we were unable to invoke nature. One of the most remarkable is arterial pressure. According to the researches of Hales and Arnott this is equal to about six pounds to the square inch. It is, therefore, evident that if the doctrine of Pouisseulle and Magendie holds, that the tension in all the arteries is uniform, basing our calculation on Arnott's figures, we would find the pressure in the radial artery equal to about sixty pounds.

Efforts have been made to determine the degree of resistance of the arterial wave by placing the weights on the foot or ankle of a leg crossed over the knee of the opposite limb. Thus, with fifty to one hundred pounds resting on the instep, the foot was seen to rise and fall with each pulsation of the popliteal artery, in an effort, it has been supposed, by the vessel to overcome the curve produced by the flexed position of the limb.

Some writers have called into question the efficacy of this test as a measure of the tensive power of the artery.

Sir Charles Bell believed that the motion of the foot was produced by the contraction of the digital arteries. But how could we have this contraction if the blood supply was

dammed back by the leverage brought to bear on the popliteal artery?

Another physiological writer denied that this test proved anything, inasmuch as "the same artery with such apparent force could be closed by the pressure of a hair, or the weight of a few pounds over the vessel in the groin." He must certainly have spoken under a misapprehension or without a practical knowledge of dealing with the living vessel, or he should know that the femoral current may be arrested by various surgical expedients, which entail no continuous pressure of any kind whatever; and, moreover, when he says that the living femoral artery may be closed in the groin by a few pounds weight he certainly is in error.

"But the mere pressure of the finger will stop popliteal throb," adds another. Decidedly, when there are one or two hundred pounds weight behind it. The force necessary to arrest the femoral current is certainly very great; so great that no one with the whole weight of his body thrown on it through his arms can maintain it for more than a few moments before he is exhausted, nor can we, with the tourniquet or rubber bandage, hold it back without putting such a strain on the constrictor as will wholly arrest every description of circulation, which if continued more than a few moments, may threaten the vitality of the whole limb. In view of these facts comes the extraordinary action of this powerful vessel, with its enormous projecting power, in the event of such trauma or disease as will produce a breach in its walls or wholly divide them. Imagine the projecting power of a vessel that will lift a bone out of its socket!

At the time of writing a middle-aged man is under my care with aneurism of the first part of the left subclavian-artery. The walls of the aneurism are very thick and the impulse great; so great, indeed, that it raises the articular end of the clavicle up fully half an inch from its meniscus with each throb. Observing the great intensity of impact in this case, and without a knowledge of the vital and salutary action of the large trunk, from which this vascular diverticulum springs, one can scarcely conceive how any description of ligature could securely close the lumen of the vessel; how it could maintain its grip without immediately beng snapped off or cut through. No wonder, then, that for ages, until the time of Ambrose Pare no one ever, for a moment, thought of the ligation of an artery in continuity, or after injury, or in disease. Under other circumstances, we may observe where the brachial artery is torn in two, it still preserves all its propulsive force, with its gaping orifice open, yet it fails to bleed. Pathologists will tell us that this provisional hemostasis in the economy succeeds in consequence of coagulation of the blood, lessened heart action, retraction of the vessel, etc.; nevertheless, though these theories are ingeniously conceived they do not give us any rational conception of the modus operandi other than from a mechanical standpoint.

With this diversion from our subject to a side, later to be considered under "Hemostasis," we will revert back to arterial tension in health.

In order to determine how long contraction continued in the arteries after death Hunter took the navel of a new-born child and tied it at both ends.

Twelve hours later he divided it, when he saw the open, gaping imbibical-artery slowly contract and finally close. He repeated the same, with like results, after twenty-four and thirty-six hours. After forty-eight hours, on division, he found that the artery had parted with its vitality, remained open and patulous, giving free issue to its contained blood. Here we have a demonstration of the active contractile properties of the artery long after it was wholly disconnected from the body, its vitality only preserved by its contained blood.

In response to what law or vital impulse does the artery force the blood-jet onward? Is it an independent action, or one intimately associated with other functions of other

organs? If we regard the arteries as nothing more than simple tubular prolongations of the central organ of the circulation, concerned only in the completion of the work here commenced, then the problem is simple of solution.

And this view of the subject, stripped of all technicalities and complexities incident to intricate investigation, is by no means without a rational basis, either from the side of structure or function. (a) Because both the heart and arteries are supplied by the vaso-motor system almost exclusively; (b) the same vitalizing fluid flows through both; (c) the heart and arteries are inclosed in an atypical muscular envelope; (d) the contractions of both are partly synchronous. In embryonic life, although their development is independent in the progress of growth they both become essentially one; much the same as the epiphysis and diaphysis of a bone-shaft in the adult. Briefly summarized, then, it may be affirmed that the arterial system is an auxiliary to the heart, and not only delivers the blood to the capillaries, but also, by its own powerful contractions, aids in its propulsion. It may be further added that the arteries are endowed with special vital characteristics, no more active in forcing on the circulation than in promptly suppressing it, in the event of danger to life from hemorrhage.

(To be Continued.)

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PHILADELPHIA, OCTOBER 12, 1895.

PROF. LOUIS PASTEUR.

The recent death of this eminent chemist removes from the world one of its greatest scientists and benefactors. His life even marks an epoch in the history of medicine.

His actual discoveries in the study of hydrophobia, anthrax and the silkworm disease, and in the fermentation of beer and wine, were of great practical value, and each had the scientific merit that, while it taught the specific nature of the evils attacked, it also made clear the way of prevention. But these studies and the subjects to which they gave rise,

the clue they gave to certain mysteries of nature did more than had been done in very many past centuries toward opening the way to wonderful advances in the study of medicine.

From the beginning of thought in the healing art there has been kept before the human intelligence the persistent problem, "What is disease?" And this was not an idle inquiry, because the radical and effective remedy for an evil flows from an intimate and precise knowledge of its nature, as is evident in Pasteur's method for preventing in the body of any victim the development of the results of the hydrophobia poison. The early medical instinct saw the importance of the problem, but until our own time there were never any but very meagre answers.

Upon that important theme all the labors of Pasteur directly bore, and if they have been as fertile in the labors of others that were inspired by his endeavors as in his own, a great part of all the glory is yet his. To-day the nature of all the zymotic diseases is comparatively clear. Of phthisis, cholera, diphtheria, typhus, typhoid, intermittent fever the plague and so on, we know that all their symptoms and the fatal results, when they are fatal, are due to the irritation and exhaustion consequent upon the development in our bodies when we are in a receptive condition, of myriads of micro-organisms that grow and flourish in our tissues as parasites. We also know the different organisms which produce certain diseases, and we have such indications of how to deal with them as puts the healing art upon a sure and scientific basis as to these maladies.

Besides the advantage to humanity that has thus come out of the labors of this simple Frenchman, how the achievements and glories of all the alleged great men dwindle into worthlessness!

Such lives bring us the example pictured in Longfellow's sweet lines:

"Lives of great men all remind us,
We may make our lives sublime;
And departing leave behind us,
Footprints in the sands of time."

THE EFFECT OF ONIONS ON DIURESIS AND PERSPIRATION IN HEALTHY PERSONS.

Stawski has studied this subject in the clinic of Professor Pasternacki, by experimenting on eight healthy persons from 22 to 38 years of age (Inaugural Dissertation, St. Petersburg, 1895; Sojous' Universal Med. Jour., July, 1895). Each experiment lasted six days, and for three days previously the person was under control. The amount administered was from 60 to 100 grammes (1 3-4 to 3 1-4 ounces). Raw onions, to the amount of 100 grammes (3 1-4 ounces), taken with a mixed diet, did not show any distinct diuretic properties, and did not affect perspiration. The weight of the body in five out of the eight cases increased during the experiments as well as afterwards. The quantity of excrements increased, this increase continuing even after the experiments in six out of the eight cases. Raw onions increase the appetite, produce vigor, and afterwards cause temporary inclination to somnolence. They also cause thirst and eructation, increase peristalsis, soften excrement, and favor its easy evacuation.

Electro-Therapeutics.

IN CHARGE OF

DR. S. H. MONELL, New York.

ELECTROLYSIS BY A CURRENT CONTROLLER FOR THE REDUCTION OF SPURS OF THE NASAL SEPTUM.*

BY. W. E. CASSELBERRY, M. D.
From the N. Y. Med. Journal.

Continued from September 28th.

To Type I may be assigned four other cases of the entire number treated.

Case II of this type.—Mr. A. G. M. complained of inability to breathe through the right side; the cartilaginous septum was deflected to the right and, in addition, situated toward the base of the convexity was an excrescence which projected suf-

ficiently forward to approach the partially collapsed ala and so close the nostril. Electrolysis was selected because of the nervous disposition of the patient, he having so little self-control that the surgical method might have involved unusual difficulties. The reduction of the excrescence was effected in three treatments at intervals of about three weeks, the process being unusually tedious for the size of the spur because only six-minute applications, with from ten to twenty-five milliamperes, were employed, unusual care being necessary on account of the adjoining deviation of the septum, not to produce a perforation. It has been wisely alleged as a disadvantage that perforation is especially liable to result from electrolysis; but this case satisfied me that it could be avoided by proper care in any case in which it would be avoidable by the surgical method.

The result was satisfactory; by the removal of the excrescence without interference with the deflection, enough space was gained for comfortable respiration.

Case III of Type I was quite an elderly gentleman, who was under treatment for nasal polypi. A cartilaginous excrescence, which prevented the ready transmission of light and the passage of instruments to the seat of polyp growth, was effectively reduced by electrolysis. His age and somewhat feeble condition led to the adoption of this substitute for the surgical method in his case. His was the only one of the ten cases in which there was any noticeable reaction after the treatment. His temperature rose slightly, he complained of heat pain and tenderness of the nose, and of a sense of malaise and headache for a day or so.

Case IV of Type I was a small cartilaginous excrescence with which I might not have deemed it necessary to interfere by the surgical method, yet the patient is much improved by its reduction. The only noteworthy feature is that the slough did not separate as a whole, but seemed to liquefy and be in part discharged and in part absorbed, without complete destruction of the mucous membrane, which has therefore been reproduced more perfectly than is usual after the cutting operation. This is an advantage, as the tendency to incrustation so frequently observed after the surgical method due to the poor quality of reproduced mucosa will be avoided. It is an advantage, however, which does not invariably follow electrolysis, since if the slough produced be large it will separate as a whole, with corresponding complete destruction of the surface mucosa.

Case V of Type I presented no features not already noted in connection with the others.

TYPE II. MIXED CARTILAGINOUS AND BONY SPURS.

Case VI.—Mr. M. J. H., aged 25 years, has lived in Colorado for two years on account of suspected incipient pulmonary tuberculosis, but has now resided in Chicago again for a year and a half. Maternal grandfather, mother, and sister died of tuberculosis. The physical signs and general condition indicate tuberculosis in a comparatively quiescent or arrested state. He now complains especially of nasal obstruction and consequent irritation of the throat, which is due to hypertrophic rhinitis aggravated by a septal spur. This excrescence is of the kind which commences anteriorly and runs upward and backward, following the sutural line of the vomer and cartilaginous plate of the septum, gathering volume and thickness and terminating opposite the middle turbinal, into which body its point presses, reaching at this plane quite across the nasal space.

March 1.—The same needles as were used in Case I were inserted into the projecting point of this excrescence. They met bone and could not be inserted as deeply as desired. The controller was adjusted gradually as in Case I to a maximum electromotive force of thirteen volts, at which time the current registered from twenty to thirty-five milliamperes, the action being maintained for seven minutes. The patient is uncomplaining, and he regarded the pain as trivial. No hemorrhage.

6th.—He suffered no discomfort after the treatment. The excrescence point is soft and smaller.

19th.—The spearlike point of the excrescence having been destroyed, a second application was made in like manner to the part of the ridge next adjoining anteriorly.

April 30.—The final result is fairly satisfactory, the spur being very much reduced in prominence, but not wholly removed. Both cartilage and bone entered into its composition, and the reduction in volume was probably commensurate with the proportion of cartilage contained in it.

Doubtless a flatter surface might have been made by the surgical method, but on account of the latent tuberculous state of this patient one would not have wished to risk either the shock or possible hemorrhage of the surgical method.

Case VII.—Mr. H. had a spur similar in location and composition to the last described; only the anterior lower part of it, however, yielded to electroylsis. The larger part of it proved to be of bone, which was unaffected by the treatment. Slight improvement only.

In one other case of this type the treatment is not yet completed, but the indications point toward a partial reduction only.

TYPE III. BONY SPURS.

Case IX.—Mr. E. R., aged 19 years, has been under treatment for hypertrophic rhinitis, adenoid vegetations, and hypertrophy of the tonsils, which are now remedied. He has also a septal spur of the kind which commences anteriorly and runs upward and backward, terminating opposite and projecting into the middle meatus of the right side.

March 20.—Electrolysis applied to the spur—eleven volts, twenty milliamperes, for four minutes—when the patient so nearly fainted that it was necessary to discontine the treatment. The needles would not penetrate thoroughly into the spur, the bone seemingly being of ivory-like hardness.

April 27.—The spur is practically unchanged, and electrolysis again attempted, the method with two lamps in the circuit for the more gradual application of the current being selected. This treatment was also a failure, for the needles could not be made to penetrate adequately, and besides the patient nearly fainted after three minutes of a current of only eight volts and ten milliamperes. A subsequent effort to insert steel needles into this spur resulted in failure.

Case X of Type III was a similar bony spur in which, failing to get a proper insertion of the needles, the process by electrolysis was abandoned and the surgical method substituted.

Conclusions.—1. As demonstrated by the cases reported under Type I, strictly cartilaginous spurs can be thoroughly removed by electrolysis —one, two, or at most three operative sittings being required. It is more tedious and less brilliant than the surgical method, but is not accompanied by any liability to immediate hemorrhage and by only a remote possibility of secondary hemorrhage. It is not to be indorsed as a universal substitute for the surgical method in even this limited class; but the number of individual cases, both in this type and in Type II, for which it is applicable is large, and with the efficiency, convenience, and compactness of the McIntosh current controller which adapts the Edison electric circuit to its use, together with properly constructed irido-platinum needles, I considered it a valuable addition to our resources.

2. As demonstrated by the cases reported under Type II, it will not thoroughly remove spurs which belong to that large class of mixed cartilaginous and bony substance; but it will reduce them in size, the amount of reduction being commensurate with the proportion of cartilage of which they are composed. The majority of such cases would therefore better be treated surgically, as being the more thorough method; but instances will arise in which the surgical method being inclined or being for some reason inexpedient, benefit may accrue from the use of electrolysis.

3. As demonstrated by the cases reported under Type III, spurs composed wholly or largely of hard bone cannot be successfully treated by electrolysis, for the reason that needles cannot be caused to penetrate preperly, and further, it is doubtful if the process is adequate, even if the needles should penetrate, to the resolution of hard and dense bone.

4. Spur or excrescence, and not deviation of the septum, is the subject of this paper. Electrolysis is powerless to correct deviated septa of any form.

Surgery.

IN CHARGE OF

Dr. T. H. MANLEY, New York.

PICRIC ACID FOR BURNS.

French surgeons have recently been using a solution of picric acid for the first treatment of burns; and it has been found that the pain which is caused by the burning of the skin can be almost immediately alleviated, or altogether removed, by painting the affected surface with a strong solution of picric acid. It is stated that the remedy has proved to be quite harmless, and that the yellow stains, which are caused by its application, can be easily washed out with boric acid. The general verdict, of those who have employed the remedy, is that it has greatly lessened suffering, and has, therefore, probably saved life, while it would appear that even severe cases thus treated have recovered more speedily and completely than would have been the case under other forms of treatment. It would, therefore, be well, presuming that experience of the remedy in this country gives identical results, if the medical officers of factories or workshops, where accidents like burning or scalding are common occurrences, would direct that solutions of the acid should be kept at hand, and explain the method of its application to the workers.—Med. Times and Hosp. Gaz.

THE SURGICAL TREATMENT OF MENINGITIS.

Mannotti (Il Policlinico, August 1, 1895), experimenting on dogs with regard to the above subject, concludes that after weak subdural injections of sublimate solution (1 in 4000) tuberculous meningitis may not only be alleviated, but completely cured. Moreover, the involution of meningeal tuberculosis may be verified even if treatment be carried out at an advanced stage of the disease, and results in the development of more or less firm adhesions between the dura and the pia mater. The mechanism determining involution seems in many points identical with that observed in peritoneal tuberculosis. The superficial underlying cerebral cortex appears to undergo slight atrophy, but the experiments are not as yet sufficiently prolonged to say what the ultimate condition of the cortex will be. The sublimate solution apparently does not act merely as an antiseptic, but probably by setting up inflammatory reaction. In acute suppurative meningitis the injections seemed of no advantage. About one or two grammes of warm sublimate solution were used at each injection.

ANÆSTHESIA.

Anesthesia must be of the shortest possible duration. The administration should never be commenced until all other preparations have been completed, and the surgeon is ready to proceed with the operation. The practice so common in hospitals of anesthetizing one patient while operation is transpiring upon another and sustaining the anesthesia until the surgeon be ready to proceed, is reprehensible in the highest degree. It amounts to culpable negligence, and the surgeon authorizing such an act should be held strictly accountable for any untoward results to the patient brought about by such malpractice.

Whenever possible the patient should be spared the sight of the immediate preparations for operation and any unnecessary display of instruments.

Never attempt to hasten anesthesia by the violent subjugation of the patient. In beginning the administration, give the patient time to become accustomed to the vapor, and to acquire confidence. A little time and patience exercised at the outset will prove a saving of time and trouble in securing the desired effects, and, invariably, will obtain a much more satisfactory anesthesia, with far less shock and harmful after effects than follow that brutal, cowardly and unjustifiable method of forcing the ether by piling all available individuals upon the prostrate body of the frightened, struggling victim, and crushing him down until he be choked into insensibility. — From Med. and Surg. Reporter, Aug. 14, 185.

MAMMARY CARCINOMA.

W. L. Rodman (Medical News), concludes that mammary carcinoma operated before infection of the axillary glands should yield 50 per cent. of cures, and that even when these glands are infected if they together with the supra-clavicular be removed the cures will reach 11 per cent. Thorough removal of all axillary glands and fat is advised in all cases. The mortality of the complete operation, the author thinks, ought not be over two or three per cent. in the hands of average operators. Statistics gathered years ago upon this subect are regarded as valueless. Not all operators are so sanguine as Dr. Rodman, but there can be no question but that the complete method of operating gives the patient a much better chance of permanent recovery than the older methods.

Medicine.

IN CHARGE OF
DR. E. W. BING, Chester, Pa.

PAIN IN CHRONIC AORTITIS.

Chronic aortitis is of frequent recurrence, but often overlooked; by reason of its insidious character its phenomena are rarely referred to the true cause.

When the degeneration of the coats of the vessel has extended to the coronary arteries the diagnosis is easier. In the commencement the symptom of pain is not prominent, but generally there is a sense of oppression and precordical weight noticed, particularly after exertion. Later on there is true retro-sternal pain of a constrictive sensation, which attains its maximum in the form of angina. Then the probability of aortitis should be considered. Sudden death from rupture of the artery may occur without the patient having complained of any pain in the cardiac region. It is frequently of short duration, and exertion may bring on a fatal result at once; but in any case, it brings on paroxysms of suffocation. The symptom of anguish, with the integrity of the respiratory function so strongly marked in angina pectoris, is one of the characteristics of the pain of chronic aortitis.

It is an affection which should be always looked for when the above symptoms are present. The physical signs show dullness at the level of the second intercostal interspace, to the right of the sternum, showing tranverse enlargement, and the elevation of the right sub-clavicular region showing the longitudinal increase of the aorta. These two signs are pathognomonic. The alteration of the valve sounds is of secondary importance.—La France Medicale.

TREATMENT OF STOMATITIS FROM MERCURY.

During prefers chromic acid in 5 to 10 per cent. solution above all the other means used in this disorder. The patient must be careful to thoroughly cleanse the mouth after using this and also must use washes of alum or chlorate of potash. If salivation is profuse, he should drink plenty of milk and take sudorifics. This treatment is effectual even in severe cases. The solution of chromic acid may also be used as a prophylactic, while its staining qualities allow it to show up the minute ulcerations by coloring them yellow.—Le Courrier Medicale.

TRANSLATIONS FROM

Foreign Exchanges

By Drs. CHANDLER and DAVIDOW.

PERFORATING TYPHOID ULCER; PERITONITIS, OPERATION, RECOVERY.

Robert Abbe (Wiener Klin. Rundschau) reports a case of typhoid fever where in the third week all symptoms of perforation made their appearance.

Two and one-half days later Abbe was called, and found heart's action and respiration increased; pulse, 140, and temperature, 40 degrees C. The abdomen was swollen and gave on percussion a dull area from the hypogastrium toward the right Ponport's ligament.

After incision in the median line the coils of intestine appeared dull red and stuck together. The true pelvis and deeper parts of the abdomen contained nearly a litre of highly purulent, foetid fluid, which was drawn off. Irrigation with a warm 1.20,000 sublimate solution was then resorted to, and this followed by one of simple warm water. In the lower ilium were many oval, thick spots, the infiltrated Peyer's patches, one of which showed a gangrenous perforation of about one-quarter inch in diameter.

This was closed with interrupted silk sutures and two layers of continuous sutures over these.

Abdomen and pelvis tomponed with iodoform gauze, the wound left open and stimulants given per rectum. The patient passed the night well and had a stronger pulse next morning. Forty-eight hours after the operation, as the patient was feeling well, the tampon was replaced by a looser one, and a dose of calomel given. There was now a movement of the bowels, some fluid fecal matter escaping, also through the wound. This condition lasted some two weeks, then ceased, and the abdominal wound closed rapidly by granulation.

Perforations from typhoid ulcers have as yet been very seldom treated surgically through fear of the exhausted condition of the patient, but otherwise there is scarcely any distinction from perforation from other causes

In one form of perforations, namely, those from appendicitis, the symptoms and localization are identical.

Up to the present time only 17 similar cases have been reported, with but three recovering; one case of Van Hork's (1891), one on Netschagaw (1894) and the author's.

Dr. Adolph Hovas in the same journal gives the foliowing treatment of bubos: The pus is emptied through an opening one cm. in length; then one-half c. c. of a 1 per cent. solution of nitrate of silver is injected into the abscess cavity. The dressing is changed every second day, the edges of the wound are washed with a 1.100 sublimate solution and a fresh injection of the silver nitrate is given. On the following day the pus formation ceases; in two to three days the livid coloration of the edges of the wound disappears. These edges and the subjacent connective tissue unite, the pain vanishes and the cure is complete in seven to eight days.

I see in the Memorabilien of August 26 a notice of Langier's article on three cases of gangrene from carbolic acid. In one instance a 1 per cent. solution of sodium carbolate and in the others a 2 per cent. solution of the acid itself was used in finger dressings, the treatment being continued for some time. From these and similar cases, L. deduces that a carbolized dressing, when its use is continued for some time, can exert a sufficiently powerful caustic action even in weak solutions to cause a partial or total gangrene, and that not only in children, but also adults, and even those who show no tendency to it. This fact is of importance not only for the physician, but also for the laity, who are apt to be more than reckless in the use of this medicament. A saturated solution of boric acid is to be preferred, as being much safer and quite as cheap.

On Monday last a Jewish baby, whose habitat was in the north end of the village of Boston, was taken with a desire to investigate the contents of a wash-tub which its mother had left standing on the floor for a few moments, while she went to the grocer's. Before baby could cry out there was a splash, and a neighbor going by the door a few moments later, saw a little pair of legs where the head ought to be. She rushed in, pulled it out and ran with it as fast as she could to a Dr. L. C. Gobron, who lived near-by, to have the child resuscitated, if possible.

Dr. Gobron, who is a regular physician, and a member of the Mass. Med. Society, absolutely refused to have anything to do with the case, and after the terrified woman had lost several valuable minutes in pleading with him, she took the child into the Suffolk Dispensary near-by, where Dr. Raddin worked over it for an hour without bringing it to. Dr. Gabron's reason for not treating the case was that the woman was a Jewess, and, as he had found that the Jews were "poor pay," he had made a rule never to treat another, and intended to live up to it.

When Dr. Raddin finally gave the case up the child's mother snatched her baby and rushed out into the street, crying: "You don't know somethings, anyhow; you do only 'speriment!"

Verily, "for this are we doctors."

C. Binz writes in the Deutsche mil.-oerzth. Zeitschr.: Quinine has been used for some time in the Indian army as a remedy for heat stroke, and with good results. The method of employment has heretofore caused difficulty, for its administration per os is often thwarted by the unconsciousness, the vomiting, cramps, etc., of the patient. On account of the slight solubility of the salts of quinia, we were obliged in its use hypodermically to inject either large quantities or acid solutions, which latter were much dreaded, because of their great painfulness, etc. Jerison succeeded a short time since in producing two easily soluble salts of quinia, one of which, the bimuriate, is recommended by Binz.

This salt comes in fine, colorless crystals; is easily soluble in less than its own weight of distilled water at ordinary temperatures.

The reaction of the light-yellow, syrupy solution is strongly acid, yet causes on injection into the subcutaneous connective tissue (not into the corium) neither pain nor inflammation.

The dose is 0.25 gm., and may, if necessary, be repeated several times.

Theoretically the action of quinine in heat-stroke may be explained on the supposition that it reduces the activity of the overheated hard-working cells.

In the Berliner Klin. Wocheuschr. of August 19, 1895, I find the following by Dr. Paul Manasse, of Strassburg:

"This specimen, gentlemen, was found in the stomach of a 44-year-old man, a joiner by trade, and much addicted to drink.

"In April of last year he came under treatment in our City Hospital on account of some stomach trouble. He complained of loss of appetite, pressure in the region of the stomach, headache, etc. His tongue was heavily coated, and there was a slight tremor in the hands. After one month's treatment for alcoholism he was discharged, improved.

"In December of last year he returned to the hospital, with indications of acute tuberculosis of the lungs and peritoneum. Death ensued on January 24. The autopsy proved our diagnosis, and we also found in the stomach a concretion which was close to an ulcer at the pyloric end. The concretion or stone is 10 cm. long, 5 cm. broad and 4 cm. thick. It is very light, weighs but 75 gm., has a pitchy appearance, a dark greenish color and is composed of superimposed layers of a substance whose chemical and physical properties show it to be shellac, which the patient had drunk to obtain the alcohol used in dissolving it."

CHANDLER.

Miscellany.

ERRATUM.

On page 266, October 5 issue, thirty-fourth line, "acardiac" should be used instead of "cardiac."

ATROPHY OF THE RIGHT KIDNEY ASSOCIATED WITH ENORMOUS COMPENSATORY HYPERTROPHY OF THE LEFT KIDNEY.

In exhibiting the specimen, Dr. Moir referred to a similar one which he had shown at the February meeting of the society. In the former case the right kidney was a flat, shrivelled cyst weighing about a drachm, and the right ureter was occluded in several places. The left kidney weighed 10 ounces, and its structure appeared merely hypertrophied. Both the liver and spleen were much enlarged. The patient died from the effects of lobar pneumonia. In the present case the patient died from exhaustion due to chronic diarrhea; both the spleen and liver were much enlarged, the latter being congested, fatty and friable. The right kidney weighed about a couple of drachms, and consisted of an encysted calculus, a small cyst containing fluid, and a collapsed cyst. The ureter was pervious throughout its course. The left kidney was very large, weighed 18 ounces, and showed marked evidence of congestion, fatty infiltration and degeneration. In both cases the patients had been native prisoners in the Presidency Jail, and their ages were respectively 32 and 26 years. In neither case was any evidence of the state of the kidneys observed during life.—Indian Medical Gazette, August, 1895.

THE TREATMENT OF EPISTAXIS.

In his clinical notes in the Clinical Journal, Mr. Shield gives some very instructive remarks upon epistaxis, which will be very useful to most people. He classifies the causes of nose-bleeding as follows: 1. Traumatism, either blows or the result of operation. 2. Ulceration of the mucous membrane, especially small ulcers of the septum. 3. New growths of the nose, especially fibrous polypus and malignant disease. 4. Symptomatic from such diseases as pneumonia, hepatic cirrhosis, cardiac disease, aneurism, fevers, etc. 5. Vicarious menstruation. Before speaking of its treatment, Mr. Shield gives this useful rule—always look upon epistaxis as a symptom, and endeavor to discover its cause. As regards treatment, his remarks may be summed up as follows: 1. If the epistaxis is salutary, leave it alone. Should the bleeding become dangerous and obstinate, proceed thus: Let the patient sit up before an open window—never lie down—so as to keep the head higher than the trunk; use ice locally and to the back of the neck. Immerse the lower extremities in hot water up to the knees, and give small doses of digitalis with ergot every three hours. 3. Speaking of local remedies, the best and only sensible method of using powerful astringents is by first detecting the bleeding spot by proper illumination through a speculum. This done, such remedies as turpentine, sulphate of iron, hazeline, etc., can be applied directly to the spot on an armed probe. 4. Should it be necessary to plug the nares, Cooper Rose's India rubber tampon should be used, or if this instrument is not attainable, lint can be used. In either case, always soak the plug in some antiseptic and cover with boracic acid, and always remove in twenty-four hours. There is a serious objection to the use of the plug, in that it may set up acute middle ear inflammation. 5. Lastly, do not be deceived into mistaking epistaxis for hematemesis, as not uncommonly blood from the nose may be swallowed during sleep and vomited afterwards.—Med. Times and Hosp. Gaz.

Prescriptions.

Infantile Indigestion.—After the babe has been nursed, give a teaspoonful of a mixture thus composed:

R. Pepsin.... .....gr. xv.
Lactic acid.... ....dr. ss.
Syrup of lemon.....oz. j.
Distilled water..oz. iij.—M.
—La Tribune Med.

Salicylic Acid Ointment.—Bourget recommends its use for gonorrheal and other forms of articular rheumatism:

R. Acidi salicylici..aa dr. ijss
Lanolin.... ..aa dr. ijss.
Olei terebinth...aa dr. ijss
Adipis.. .....oz. iij.

It is reported of this application that the acid is so thoroughly absorbed that it is afterwards found in the urine in large quantities, also that the local and general effects are most satisfactory.—Therapeutic Gazette.

Lemonade for Diabetic Patients.—The following lemonade may be prescribed for diabetic patients who suffer from thirst, and who beg for a drink with a sweet taste:

R. Acid citric..5 grammes (77 grains)
Glycerini puri..20 to 30 grammes (310 to 355 grains)
Aquæ puræ..1000 grammes (35½ ounces)

To be drunk in small quantities during the 24 hours.—Medical Chronicle.

Typhoid Fever.—Dr. H. Huchard, of Paris, recommends the administration of the following powders to secure intestinal antisepsis:

R. Benzonapthol.. ..dr. vjss.
Powdered charcoal..oz. ss.
Pancreatin.....grs. lxxx.
Mix and divide into 50 powders.
Sig: Take from four to six powders a day.

Dr. Burney Yeo's method of administering free Chlorine is useful. Chlorine is one of the most efficacious remedies in typhoid fever, and, as Murchison pointed out, it has a most beneficial influence upon the abdominal symptoms .The tongue promptly cleans, and the fetor of the evacuations disappears in 24 hours. The method of preparation is as follows: To a 12-ounce bottle add 30 grains powdered potassic chlorate and 40 minims of strong hydrochloric acid, cork the bottle until it becomes filled with chlorine gas, then add water slowly, shaking frequently; 24 to 36 grains of quinine and an ounce of syrup of orange peel may be added. One ounce of the mixture should be given to an adult every two, three or four hours, according to the severity of the case.—Med. Times and Hosp. Gaz.

TREATMENT OF BURNS.

Aristol.. ..... 5—10|0
Olive oil.... ..... 20|0
Vaseline,
Lanoline..... ....aa 40|0
—Haas.

GONORRHOEA.

Perchloride of mercury... 1 part
Antipyrin..... ..... 100 parts
Distilled water..... 10,000 parts

The injection should be used four times a day and retained as long as possible. The addition of antipyrin prevents smarting.—Vatier.

CHORDEE.

R. Ex. opii..... gr. j.
Camphoræ..... gr. x.
Ol. theobrom..... q. s.
M. et ft. Suppository No. 1. Sig: Use at bedtime.
—Ricord.

GONORRHEOA, SECOND STAGE.

R. Hydrarg. chlor. corros. gr. 1-6
Acidi carbolici.... dr. iss
Zinci sulpho-carbolate gr. xxiv
Boro-glycerine (fifty per cent. sol.)..... oz. ij
Aquæ rosæ q. s. a. d. oz viij
M. Sig: Use as injection after urinating.
—White.

Women affected with metritis or displacements often suffer with dry cough without any disease of the respiratory organs.—Pozzi.

INCONTINENCE OF URINE.

R. Sodii benzoatis,
Sodii salicylatis..aa gr. xx.
Fld. ext. belladonnæ gtt. ij
Aquæ cinnamoni....oz iv
M. Sig: A teaspoonful four or five five times daily.
—White.

TRICOPHYTOSIS.

Chrysarobin..... gm. 10 to 25
Salicylic acid..... gm. 5
Ointment of styrax..... gm. 5
Ichthyol..... gm. 5
Simple ointment..... gm. 5
—Du castle.
—N. Y. Med. Record.

The Times and Register.

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ROYAL COLLEGE OF SURGEONS 31 OCT 95 EDINBURGH

Original.

THE OPERATIVE PRINCIPLES OF MEDICAL AND BIOLOGICAL SCIENCE.

BY W. R. DUNHAM, M. D., KEENE, N. H.

Continued from last number.

To proceed in the direction of disease problems, after ruling out of consideration diseases of the vital property sensibility and construction of malignant growth, we have left two grand divisions of disease to be recognized that constitute a large share of disturbances in the field of practical medicine.

With the two grand divisions there may be recognized, first, diseases of sensation; second, diseases of sensation and instinct co-operatively.

A great variety of disease exists as abnormal sensations, some kind of bad feeling, from which the patient seeks relief. A condition of discomfort, relative to which the physician must accept the testimony of the patient. With such ailments there seems to be no other of the four vital properties disturbed to any great extent.

And the treatment for this class of ailments consists largely, but not wholly, in effecting measures for an exchange of sensations. A swapping of sensations, from relations of medicinal contacts, that will occasion a more agreeable sensation. This constitutes a very large department of disease and field of medical practice, while I have time only to outline its existence in the field of operative proceedings.

All our happiness and all our misery is experienced and made known to us in the name of sensations and sensibility.

And, in illustration of a few of the many peculiarities in association with the function of sensation, I will mention that hunger, thirst and weariness are factors of sensation; speaking and communicating with sensibility; soliciting aid from the exercise of this special life and mind function.

Thus, while hunger and weariness may be relieved with food and rest, also certain kinds of material medicine may effect a swapping of sensations, relative to which the mind may reason fallaciously. The contact presence of alcoholic spirit usually occasions an agreeable sensation. Thus, the sensation of weariness may be exchanged for a more agreeable sensation with this remedy.

Therefore, the patient, feeling less weary, persuades himself to accept that he has more strength from a contribution of supplied energy. It is stated in the United States Dispensatory "that alcoholic spirit gives energy to muscles."

In such instance the person has not become the recipient of more strength; there has only been effected a swapping of sensations. The existing and new sensation not representing the true condition.

A large amount of correct medical practice is implied in the swapping of sensations, while the method of swapping may be more of less disadvantageous in many instances.

Too frequently, it is true, that what are called nerve tonics and nerve foods are not foods in any sense whatever, but merely chemical compounds that effect an exchange of sensations.

The modern treatment of alcoholism consists in effecting an exchange of sensations.

It will be discovered that it is very difficult many times to solve disease problems without first recognizing the special functions of the four vital properties.

That wonderful discovery of strength-giving product found in cocoa leaves and the kola nut also furnishes an illustration where an exchange of sensation has been effected. There is sufficient in this department to engage our attention for many hours, but I will close with the following quotation: "All authorities attribute to kola a remarkable power in augmenting the bodily and mental strength. On long marches the natives were accustomed to carry with them a supply of kola nuts, and, if food was lacking, recourse was had to them in order to allay the growing pains of hunger; if water was unobtainable, thirst was assuaged by chewing a small portion of one of these nuts."

With the second grand division of disease implied in the abnormal function of sensation and instinct co-operatively we not only have the function of sensation to recognize, but to recognize with such degree of abnormal sensation as to occasion instinct to exercise pathological vital action. Pathological action is active disease, in distinction to abnormal sensation, which may be called passive disease.

It might be well in this place to define disease as it should appear in dictionary definition.

And the most scientific definition that can be expressed in language is, that disease is the abnormal exercise of one or more of the four special active vital properties. There is no agency, no active principle that exercises pathological action—that exercises morbid action—except the abnormal function of the active vital principle.

Disease begins with an abnormal sensation. The cause of disease does not act. It exercises no influence. It is passive even to the fullest extent of what such word may imply. The cause of disease causes abnormal sensation by its contact presence, while disease may continue to exist merely and only as an abnormal sensation, or the abnormal sensation may exist to a degree that is succeeded by an involuntary pathological activity marshaled into service by the function of the life property—instinct—constituting the second grand division of disease previously defined.

A thorn thrust into the flesh may only cause abnormal sensation; or, it may cause abnormal sensation to a degree that is succeeded by active inflammation, which constitutes pathological vital action; in other words, active disease.

One simple problem, perfectly understood, is as instructive as would be a thousand similar problems.

Provided the human organism is made operative, by virtue of a life force agency, defined in the name of the four active vital property functions, and that said functions can be abnormally manifested, it then becomes evident beyond the possibility of supported contradiction that the alleged mysterious agency expressed in the language of "active cause of disease" and also the alleged "active medical principle," are no more or less than manifestations of pathological vital action. In other words, those two alleged departments of agencies or active principles incorporated into the doctrines of medical science are no different operative agencies than the abnormal functions of the active vital principle.

Thus, medical science has no different operative principles from what exists in biological science, in the functions of the four active vital properties.

There is no practical advantage,

no more intelligence expressed, no scientific principle illustrated to better advantage in the use of such phrases than there would be to attribute all operative active principles to the functions of the active vital properties.

As fundamental ideas in the field of medical and biological science it is essential that we recognize that what is called the action of medicine and what is called the action of disease and pathological vital action; also that the action of poisons constitute but one and the same kind of operation.

The phrase pathological vital action expresses all that is implied in such operations.

There is no scientist who can define and demonstrate any distinction between those four alleged operations expressed in the varied language here used.

The two grand divisions of disease constitute a very large subject, but we must dismiss this department and briefly consider the general relations of material medicine to the operative human organism. In the treatment of all disease from a medical standpoint the physician must appeal to the sensation; must either effect a change of sensation or occasion a new sensation of such degree as will be succeeded by such special involuntary vital action as seems proper, in his judgment, to have established. The physician may cause the sensation of nausea, with a view to establish the operation of emesis.

Medicine does not act—it has no active principle. It causes a sensation, in response to which instinct inaugurates a special involuntary vital act.

It is by the producing of sensations with medicinal contacts that enables the physician to harness up and utilize to a limited extent the involuntary life force agency. The physician cannot supply "active medical principle," but he may modify and indirectly guide the involuntary active vital principle.

How all these general principles apply to each department of special disease constitutes another large subject that must be dismissed that we may take up a different application of scientific principles.

To go back and recognize that disease begins with abnormal sensation, it then becomes important to consider what constitutes the variety of causes of abnormal sensation. Abnormal sensations are produced by contact relations in a very large majority of instances; and, while it is not important to enumerate the special causes in detail, it is extremely important to recognize the different divisions of such causes.

Thus, I mention, a surplus quantity of nutrient material may be a cause of abnormal sensation. Also, ultimate elements, chemical compounds, pathological products, chemical changes with such products, mechanical relations of congestion and elevated temperature of the blood.

And, in addition to the several divisions of causes that occasion abnormal sensation, I will also call attention to a distinction which exists with causes, that must always be recognized when considering disease problems.

That is, in accordance with the nature of things, we must recognize the distinction between primary and secondary causes of disease—causes of pathological vital action. In other words, in this connection we are required to recognize that no disease known by any name has its beginning and continuance from a primary cause.

Whatever the primary cause may be as the first cause of disturbance, in a brief time secondary causes are made to exist, such as pathological products and chemical changes with such products, congestion, infiltration and elevated temperature of the blood.

Each day new secondary causes are developed in some of the divisions enumerated.

No doubt you have all discovered that in accordance with the theory presented, no provision has been made for the discontinuance of pathological action. Therefore, it is important to call your attention to an unmentioned principle associated with the living human organism, which provides for such emergency.

This principle is called toleration, which implies that a cause similar to what has existed may continue to exist; yet the cause fails to develop a continued disturbance.

It is this principle which enables a person to become acclimated in a malarial district. It is this principle which measures the time in more or less of the self-limited diseases, and also interferes with a similar medicinal effect in the use of long-continued remedies.

This principle is a wise provision in nature, made applicable for self-preservation, and a condition to be artificially induced by medication in the treatment of some forms of disease. The existence and application of such principle is too well understood to require further illustration in proof of its association with the affairs of the living human organism.

Medical and biological science is not that crude department of operations as given interpretation by the ancient mind in supplied powers of "active medical principles," but is implied in many very fine distinctions of operative active vital function; and it will be accepted sooner or later that the active vital principle alone, with its four distinct functions, constitutes the operative principles of medical and biological science.

In medical and biological science we are required to recognize finer distinction of intricate relations than is taught in the schools.

Ideas mean something. The physician has no more scientific use for the phrase "active cause of disease" and "active medical principle," than has the astronomer for the phrase "the sun's revolution around the earth."

Such phrases are misleading, not representing either facts or operative principles, and are largely responsible for the scientific ignorance that pervades the non-professional mind. The laity have great expectations from the working qualities of alleged "active medical principles." Thus it is often a matter of too great indifference as to who shall supply such presumed operative agencies for the cure of disease Therefore, when the laity are elevated to a comprehension that the physician cannot supply "active medical principles," but is restricted to the guiding of the involuntary-active-vital principle, it will be unnecessary to pass laws to regulate the practice of medicine, for no well-informed person will then employ an alleged physician who is not well educated relative to the functions of the co-operative vital force agency in its many relations to the great variety of disease.

The criterion of ability will be vested in a knowledge of this department of nature's operative forces.

It is of the greatest scientific importance to recognize whether the active principle exists in material medicine or in the living human organism.

Among the serious delusions that have pervaded the mind, none have equaled in magnitude or been perpetuated with greater assurance than the belief that some external agency—some external active principle, not vital—was ever acting on the human organism, either injurious or beneficial.

The idea that the human organism was complete in itself, endowed with all the active principles in itself; endowed with all the active principles necessary for life operations, has not been accepted as among the provisions authorized by the Great Architect of the universe.

This doctrine of operative agencies not vital was given publicity during the dark ages, and the modern mind thus far has failed to escape from the influences of this ancient superstition, and the only reason for the long toleration of such acceptance is implied in the failure to comprehend the true nature and varied functions of the vital force, and how such functions co-operate.

We are living in an age of approximate intellectual equality in matters of science, where, in place of a few leading minds being delegated to read and interpret the pages of nature, the whole human family of culture will be equally capable of reading this book for themselves.

A PRACTICAL STUDY OF THE BLOOD AND THE CIRCULATION, WITH A HISTORICAL REVIEW OF THE SUBJECT AND ITS BRIEF CONSIDERATION FROM THE STANDPOINT OF ITS CLINICAL COMPOSITION, ANATOMICAL STRUCTURE, AND PHYSIOLOGY; INCLUDING CLINICAL STUDIES, AND EXPERIMENTAL RESEARCH ON THE LOWER ANIMAL.

BY THOMAS H. MANLEY, M. D., NEW YORK.

Continued from last number.

PART V.

THE VENOUS BLOOD.

In the regular order of the consideration of the three vascular systems which convey the blood through the body the capillary should next engage our attention; but, inasmuch as my researches on those minute structures have been rather extended, and in some few particulars original, it has been decided to leave this for the third and last division of the normal circulation, when it will be taken up conjointly with the hematic elements; therefore, while at this stage of our inquiry, a few observations will be made on veins.

There are many features connected with the flow of blood through the living veins which are very remarkable, and the manner of their repair after laceration or puncture is in some respects most extraordinary and difficult of interpretation. For example, we thrust the conical end of our thumb lancet into the median-cephalic and make a wide breach in its walls; the blood comes forth in a gush, in such quantities, as the necessities of the case require; we remove our constricting bandage, place a pad over the vent, under moderate pressure—and what happens? First, the aperture is closed to the escape of blood. Second, the divided edges come together, and the third, in a short time, the lumen of the vessel reopens and the circulation is once more re-established.

Again, we undertake a phlebotomy in one in a state of agitation, and we divide superficial vessels we will no blood will flow.

Again, when blood flows from a vein slowly, one, two or three pounds may be lost, with comparatively no serious constitutional disturbance, while with the same quantity suddenly ejected from an artery the most alarming or even fatal syncope may follow. Now, what deductions may we infer from these facts?

First—That the venous is a passive current; that it exercises practically no positive pressure; that it is probably quite independent of cardial impulse; that the venous system is but a reservoir for the reception and storage of the deoxygenated vitiated capillary blood, which moves onward toward the heart rather by respiratory movements and suction than by a vis a tergo.

The vaso-motor system of nerves powerfully acts on the venous system, more directly, it has seemed to me, than the arterial, for while the pulse yet beats a full stroke the open veins will not give issue to a drop of blood when the patient is under the influence of fear or great agitation. In some of my experiments it was apparent by various tests that the finer arteries and capillaries moved on—the blood current being quite independent of all nerve influence—by their own inherent vital properties.

Clinicians of former times noted that the escape of moderate quantities of venous blood rather gave fresh energy to their patients than exhausted them; to us a paradox—that their loss was a gain.

Danger through exhaustive escape of venous blood comes rather through a disturbance of the equilibrium of the blood current than an abstraction from it. The blood is highly charged with a gas of active noxious properties, which is carried to the pulmonary glands to be blown off with the expired air. It is true, that the clinical and physical properties of the venous blood are in certain respects similar to the arterial, which is admitted, but a comparative esti-

mate of those vital elements which elude the scientist cannot be determined.

We know that the physical and clinical elements of uremic blood are quite similar to those in health, yet the effect of this fluid is to favor dissolution. Recent observations have quite conclusively proven that weak saline solutions, in extreme acute anemia, injected into the vessels, are quite as effective as defibrinated venous blood. We might, perhaps, estimate the vitalizing properties of the carbonized and decarbonized blood with the so-called "live" and exhaust steam of the engine. As the fresh steam enters the cylinder its energy is tremendous; when in a moment after imparting motion to an inanimate mass, its elasticity and energy have departed, to be only restored again through a renewal of its vitality under the influence of heat. Time will prove that the functions of the lungs are much more complex than is generally supposed, and that something more has taken place in the air vessels than the elimination of carbonic acid and renewal of oxygen. The loss of venous blood gives relief by lessening the burden thrown on the right ventricle—much on the same principle that the energy of an engine is more effective when concentrated in moving a few pieces of machinery than several. A diminution of the volume of blood is soon made up by dilution, the corpuscular elements are reduced in number, and, hence, the work of pulmonary rehabilitation is more effectively performed.

Anatomically and pathologically, the veins present many features of great interest. They are very thin-walled, with little or no muscular or elastic substance in the middle tissue, so that through their transparent envelope we may easily outline their deep blue contents. Many of them have sacculated reduplications or valves, and in different regions they possess special characteristics. In the portal system they are destitute of valves, in the liver they are so tunneled through its substance as to remain permanently dilated. In the skull we find the main venous channels at the base, so encased in furrows of bone as to be effectually protected against compression. The pulmonary veins carry arterial blood and the spermatic or pampiniform plexus possesses many dered to duty November 1 in charge of the characters of arteries in their composition. The venous system is estimated to have a capacity from four to five times greater than the arterial, capillary and the lymphatic; the latter this system drains by way of the thoracic duct. In fact, as it sweeps over the extensive areas of the body it gathers up all the products of tissue metabolism, waste and disintegration to carry them on to the liver, or the lungs, for their destruction, elimination or their transmutation into new elements.

It is highly probable that under a vast number of circumstances, when toxic infectious elements accidentally enter the economy through the integumental or mucous surfaces, or through punctures or abrasions, they are first caught up by the capillaries and delivered to the veins, and under normal conditions are seized on by the hepatic or pulmonary epithelia and destroyed before the depurated current is prepared to enter the left chambers of the heart. In the extremities we have two separate sets of veins—the superficial and the deep. We will commonly observe that as the veins traverse through the tissues that their coats are intimately incorporated with structures in which they lie, and that their position is more or less fixed. Their feeble framework renders this necessary and saves them from the effects of severe strain. This is obvious in many situations wherein this provision is wanting or is inadequate. In this particular they widely differ from the artery, which must have free and unfettered action to perform those movements incident to the propulsion of the blood into the capillaries.

The vein in an exposed situation, after laceration or puncture, is a docile organ, and hemorrhage from it is controlled with the greatest ease and certainty, unless the blood itself is the seat of pathologic changes.

Local pathological changes in the veins are very much more frequent than in the arteries. Varix of the hemorrhoidal, saphenous or the spermatic plexus, a localized distension of the walls of the vessel, is as common and harmless to life as its congener, arterial sacculation, or aneurism, is unusual, serious and mortal.

In the veins the current is languid and quite devoid of that impetuous rush so characteristic of the arterial torrent.

From the foregoing it is evident that:

First—The venous system serves only to receive and store the blood as it drains the capillaries.

Second—In contradiction to the arterial system its functions are passive and it probably is entirely devoid of any contractile energy.

Third—Its tubular conduits serve only as inclosed furrows for guiding and conveying the vitiated blood current, and are in no manner concerned in the centrifugal motion toward the heart.

Fourth—In this system of vessels we may observe in a large degree the movement of the living fluid in response to the laws of the hydrodynamics. The blood has now been sent through all the tissues and has parted, in a large measure, with those vital properties which lend so powerful an element to its energy, and is impelled through those valvular channels rather by mechanical agencies than its own vital principle.

Fifth—Venous blood decomposes much more quickly than arterial. In combination with the lymphatic vessels it performs the scavengering of the entire body, taking up and carrying to the lungs for destruction all effete or noxious materials lying in its pathway.

Sixth—The veins offer great resistance to trauma, and when wounded undergo almost immediate repair, but often at adult age they are very frequently the seat of pathologic changes, and in systemic infections offer less resistance than the arteries.

(To be Continued.)

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PHILADELPHIA, OCIOBER 19, 1895.

LOOKING AHEAD.

At this early date we are beginning to forecast as to the best plan for improving the value of The Times and Register for 1896. We trust our constant subscribers have noted such changes as have been made in the past looking toward the bettering of this journal. We see the possibilities of greater improvement and usefulness to the profession during the coming year by abandoning some of our former lines and working with greater energies upon others, although not entirely new to this periodical.

In the first place, beginning with

the first issue in January, 1896, we propose to unite the pages and material now supplied twice in two weeks into one larger and better volume, with a handsome cover, delivered to our subscribers every other week (Saturdays)throughout the year. Thus in place of twenty pages of reading matter every week we will issue forty pages of reading matter every fortnight.

We expect during the coming year to have some very excellent practical material from the pens of some of our most able professional men. In order to do this the expense of production, instead of being less than at present, will be decidedly more, but we feel confident that it will soon pay for itself in the increased subscription list which such a journal will warrant.

For the past two years we have been placing our journal at the nominal price of $1 a year. While this has given us a largely increased circulation and accommodated itself to the hard times the past years, it has not warranted us in making the improvements which we now contemplate; hence, after January 1 the subscription price will be advanced to $2 a year. However, for the benefit of our old subscribers, we propose to continue such subscriptions for one year as are received prior to January 1, 1896, at the old rate, of $1, and such new subscriptions as are received prior to that time will have equal chance.

We also expect to remove the editorial office to Boston, Mass., shortly, continuing the business offices as at present, under the immediate charge of Dr. Joseph R. Clausen, the business manager. The editorial staff will remain as at present, Dr. Parsons simply conducting the journal from "the Hub."

While reducing a weekly journal to a bi-weekly may appear to some minds in line of retrogression instead of progression, we can confidently assure all our friends that this will not be so in our case, as they will see later on. We contemplate using better paper, better typography and double the amount, both in material and circulation, than we now produce in a weekly issue. We are confident all our subscribers will be much pleased with the changed appearance, and, inasmuch as the same volume of work now done will appear during the year 1896, there will be increased value to the "Times and Register." Send in your subscriptions to embrace the $1 offer.

THE MEDICAL TIMES AND HOSPITAL GAZETTE, OF ENGLAND, THUS ENCOURAGES THE YOUNG MEN OF THAT COUNTRY IN THE PRACTICE OF MEDICINE AS A PROFESSION.

"Those who contemplate entering the medical profession ought to be told that the profession is so overcrowded that it will not be possible for young medical men to earn an adequate income from the honorable practice of their profession unless they are able to buy good partnerships, obtain public appointments, or are fortunate enough to be the sons of medical men in good general practice. Failing this they may keep the wolf from the door by accepting the position of "medical officer" to a Medical Aid Society, starting a sixpenny dispensary, or like some of our confreres at Liverpool, by entering into arrangements with grocers and others to attend gratuitously purchasers of a pound of tea or other article in wide domestic use!"

Surgery.

IN CHARGE OF

DR. T. H. MANLEY, New York.

ENLARGED PROSTATE.

BY ARTHUR T. CABOT, M. D., BOSTON.

Hypertrophied Prostate, etc.

We intend to confine ourselves in this discussion to the treatment of cases of enlarged prostate. It is necessary, however, to briefly review the pathological changes involved in hypertrophy of the prostate, in order to properly understand the indications for treatment.

The increase in size is due in part to a hyperplasia and hypertrophy of

the glandular portions of the organ, and in part, also, to a great increase of fibrous and muscular tissue throughout the prostate. Sometimes the fibrous tissue forms distinct tumors, similar in many respects to the fibroids so common in the uterus.

This overgrowth in the prostate may be circumscribed and mainly confined to certain parts of the organ, or it may be generally diffused. Its main interest to us lies in the question as to the extent to which it encroaches on the urethra and thus interferes with the outlet of the bladder. If one lateral lobe is especially enlarged it pushes the urethra to the opposite side, and the lateral pressure may so flatten out the canal as to greatly impede or to prevent the flow of urine through it.

The part of the gland more commonly concerned in the obstruction to urination, however, is the so-called third lobe, which lies between the ejaculatory ducts and the bladder, and which really forms no distinct lobe except when hypertrophied. Then it may project far back into the bladder as a rounded swelling, or may form an elevated ridge below the urethral orifice, and, in either case, is likely to act more or less as a valve to occlude this orifice.

It is not then the size of the prostate gland merely that causes the obstruction, and a very large prostate may not encroach on the urethra sufficiently to interfere with its functions, while, per contra, a moderate enlargement of the third lobe may entirely close the orifice of exit from the bladder.

According to Guyon there is a primary stage of congestion of the prostate which precedes the state of enlargement and to which the earlier symptoms are due. This is a condition which cannot be clearly recognized after death, and the existence of which is made probable by clinical evidence rather than proved by demonstration.

Associated with enlargement of the prostate, and to a great degree dependent upon it, are other serious pathological changes. The efforts of the bladder to overcome the obstruction in the prostate naturally lead to a hypertrophy of the muscular coat of that organ; and presently the failure of the bladder to completely free itself of the urine leads to its dilatation.

Sacculation is caused by the protrusion of the mucous coat, forced between the fibres of the muscular tunic by the efforts of the organ to empty itself. Extending further backward the obstruction gradually leads to dilatation of the ureters and the pelvis of the kidneys. Associated with these changes we frequently have a slowly forming scerosis of the kidney, due to hypertrophy of the interstitial tissue.

Inflammatory changes in the genito-uninary organs behind the prostate are also brought about, and, when once existent, are perpetuated by the obstruction in the prostate. Cystitis, which is usually the first inflammatory condition to appear in these cases, may be induced by a stone forming in the residual urine, may result from some exposure to cold or to some uncommonly irritating condition of the urine, but usually owes its inception either to the irritation of some instrumental interference or to micro-organisms introduced on urethral instruments.

Inflammation in these cases, starting in the prostatic urethra and about the neck of the bladder, may have a vesiculitis or epididymitis associated with it. Later it may extend backwards through the ureters to the pelvis of the kidneys, to there set up a pyelitis, and, later, a pyelonephritis. This backward extension is greatly favored by the dilatation of the ureters which so often precedes the inflammation. — Boston Med. and Surg. Journal.

DOUBLE DISTAL LIGATURE FOR INNOMINATE ANEURYSM.

A man aged 49 suffering from a large and thin-walled innominate aneurysm which had produced dislocation forwards of the right clavicle, and which had defied the usual medical measures of treatment, viz.: prolonged rest, iodide of potassium, etc., is now under surgical treat-

ment at the Mater Misericordie Hospital. His right subclavian and common carotid arteries were simultaneously ligatured three weeks ago, and both wounds have long since closed per primam. Consolidation has not, however, taken place in the aneurysm, but its pulsation has become must less strong, while its walls have become thickened by fibrinous deposit. The arteries of the patient's right arm are, moreover, pulseless. The distal operation for innominate aneurysm, which the writings of Mr. Barwell, of London, have done so much to popularize with surgeons, has been performed on three occasions only in Dublin—once by Mr. Conway Dwyer, of Jervis Street Hospital and twice by Mr. Coppinger, of the Mater Misericordie Hospital. The first two patients are now well and apparently cured of their disease, while the last, the most serious of the three, promises fairly.—Lancet, Aug. 24.

THE TREATMENT OF OBSTRUCTION OF THE COMMON GALL DUCT.

McGraw (Annals of Surgery, August, 1895) is strongly opposed to the operation of cholecystenterostomy for jaundice caused by calculi in the common ducts, and holds that though it is easy of performance and gives speedy relief, it belongs to the period of development in the surgery of the gall ducts, and cannot long retain the place which it now holds. The operation, which has been frequently performed since the introduction of Murphy's button, though it gives relief, fails to come. The stone which caused the obstruction remains in the common duct, irritating it by its presence, and threatening suppuration with all its dangerous consequences. The adhesion established between the gall bladder and bowel will inevitably produce at times great traction on one or other of these organs, and interfere with their movement and with the performance of their proper functions. Again, the adhesions produced by gall stones are often more serious and cause more disturbance — colicky pains, flatulence, chronic dyspepsia— than the passage of the gall ducts themselves. After the operation, while the gall bladder takes on itself the function of the common duct, the latter becomes to all intents and purposes an abnormal gall bladder, which may contain stones and be irritated and inflamed. It is not yet known how long the artificial fistula between the gall bladder and the intestine will remain open and permit the free flow of bile. The tendency of such orifices, it is pointed out, is to gradually contract and close. The only rational procedure in cases of obstruction of the common duct by stone is, the author holds, removal of the obstructing body. If the patient be so exhausted by long-continued jaundice that a prolonged operation is inadvisable, the surgeon should establish a biliary fistula through the abdominal wall, as that procedure would give as much relief as the operation of cholecystenterostomy, without injurying the intestines or establishing new adhesions within the abdomen.

THE ACTION OF ERYSIPELAS SERUM ON MALIGNANT GROWTHS.

Kopfstein (Wiener klin. Rundschau, 1895, Nos. 33 and 34) has tried the action of three different strengths of serum from sheep inoculated with erysipelas streptococci in 15 cases of malignant disease; 13 of these were carcinoma, one sarcoma, and one malignant lymphoma. In almost every case the injection was accompanied by violent burning pain in the tumor, often lasting some hours. Severe headaches and pains between the shoulders and in the loins were almost the rule; while many of the patients suffered also from joint and pleuritic pains. Rigors, with grave general cyanosis, followed by great weakness, were seldom absent after the injection; in one case two rigors followed a single injection. As a rule injection was followed by a rise of temperature, the highest being 105.8 degrees, the average 101.2 degrees. The rise was us-

ually with the rigors, but in one case the temperature reached 103 degrees without a rigor. The fever came on half to one hour after the injection, and lasted four to six hours. There was no albumen in the urine. Other occasional consequences were nausea, vomiting, noises in the ears, diarrhea, palpitation, epistaxis and dyspnea Injection of the primary tumor had no effect on the secondary growths, but rather led to an increase in the size of the glands. Injections into the metastases did not affect the primary growth, but the metastases themselves became a little harder than before owing to an increase of connective tissue. The carcinomatous nests were, however, unaffected. Primary non-ulcerated growths behave like injected metastases. There was prolonged swelling and tenderness after the injection, at the seat of which an abscess formed in one case. In another the tumor broke down, and discharged carcinomatous masses without pus. Ulcerated growths showed well-marked reaction to injection. The base took on a healthy appearance, the stinking secretion disappeared, and the edges became flatter and eaten out. In some cases the whole basis and margin softened, and numerous islets of soft red tissue shot up on the healthy soil. Histological examination of these, however, showed granulation tissue, containing cell nests with perfectly formed cancer cells. The secondary growths were in no instance affected. The only action upon malignant lymphoma was clearing up of a gangrenous ulcer, while a sarcoma of the ilium became larger after injection, and the patient developed sciatica, which had not before been present. Kopfstein hence considers the action of this serum to be purely local, the tumors undergoing alteration only in the immediate neighborhood of the injections. Even where diminution of the growth occurs, which is mainly in lucerated cases, no prospect of cure can be held out. He strongly indorses Burns' view that this new method has not in the least advanced the non-operative treatment of malignant disease.

Medicine.

IN CHARGE OF
DR. E. W. BING, Chester, Pa.

THE TREATMENT OF ITCHING IN URTICARIA.

Berliner, of Aix la Chapelle, recommends (Gaz. Med. de Liege, Aug. 22) the following method for the relief of itching in urticaria. The affected surfaces are first wetted with cold water, and then rubbed for ten to fifteen seconds with a minute quantity of common table salt with the pulp of the wetted forefinger. After the friction a small quantity of oxide of zinc ointment or rice or starch powder should be applied. The application soon causes a pleasant feeling of freshness, the itching diminishes or ceases, and the papules disappear. When extensive surfaces have to be dealt with, the saline frictions should be made gradually over limited areas lest too intense a mechanical irritation be produced. At the same time tepid bathing and appropriate dietetic and other treatment should be employed.

SULPHONAL, TRIONAL AND TETRONAL.

Bresslauer and Joachim (Centralbl. f. d. gesammte Therapie, August, 1895) compare the value of these hypnotics: (1) Sulphonal has certain disadvantages. Its action is slow, owing to its being nearly insoluble, and sleepiness rather than sleep is produced. After long use (1) vomiting and constipation; (2) ataxia of the lower limbs with paralyses and muscular spasms; (3) anuria, ischuria, and hematoporphyrinuria have been observed, some of these cases ending fatally. The authors have had no bad results since they made a rule never to give it for more than three days in succession, in doses not exceeding two g. pro die, and to regulate the bowels and kidneys. It should be exhibited always in hot water (tea, etc.) in as good solution as possible. (2) Trional acts excellently in neurasthenic insomnia, chronic and periodic mania, etc. The

authors (contrary to the experience of many) have had good results also in melancholia, and hallucinations accompanied by violence, even 0.5 g. having a sedative effect. Experiments have shown that animals can be poisoned in exactly the same way as with sulphonal, and in man up till now four cases of poisoning (two fatal) have been recorded. Its action is cumulative and delayed from 15 minutes to three or more hours after administration, but this is not nearly so marked as with sulphonal. Sleepiness continues in some cases during the next day and even night. Symtoms of poisoning were observed in a number of cases after continued administration, namely, dullness, giddiness, headache, anorexia, obstinate constipation, ataxia of the lower limbs, and sometimes oliguria or even strangury. Noises in the ears, cutaneous hyperesthesia (Friedlander), any marked action on the heart and respiration or epigastric pain (Koppers, Romert) were never observed. Such transitional cases lead up to the more marked ones of chronic poisoning, where the symptoms are very much like those of sulphonal poisoning, ending in hematoporphyrinuria, hyperacidity of the urine, and death. Reinecke recently reported a case in which 40 g. spread over three months, caused severe poisoning. The fact of this idiosyncrasy makes the following rules necessary: (1) Trional must never be given continuously in larger doses than one to two g., and always in a large quantity of warm fluid—soup, tea, etc.—in which it is readily soluble. (2) After administration for four to six consecutive days, breaks of several days must be made. (3) The patient should take some natural alkaline mineral water during the course. (4) Constipation must be corrected. (5) If hematoporphyrinuria be present, the drug must be discontinued at once, diuresis and free evacuation of the bowels obtained, and the blood neutralized with four to six g. sodii bicarb, pro die. If these precautions be taken, trional is one of the best and relatively safest hypnotics. (3) Tetronal has all the disadvantages of sulphonal without its power, its action being more sedative than hypnotic. If given, all the precautions necessary for sulphonal and trional must be taken.

THE TREATMENT OF CHRONIC CONSTIPATION WITHOUT MEDICINE.

J. Schreiber (Wien. Med. Presse, Nos. 21 and 22, 1895) calls attention to the great change in the treatment of chronic constipation during the last ten years. Before he had adopted the mechanical treatment he was unsuccessful in relieving 10 per cent. of his patients; since then he has had only three failures in 100 cases. His course of manipulation extends over six weeks to three months, and consists in systematic massage of the large intestine for eight to ten minutes daily. A considerable amount of power is employed, and the rubbing and pressure are directed by anatomical considerations. The cure is assisted by gymnastics and exercise; if necessary, mild aperients may also be employed. The diet also is carefully regulated. Before massage is begun the absence of floating kidney, uterine or ovarian disease must be ascertained. Schreiber distinguishes four forms of chronic constipation: (1) In strong, healthy, often young patients; due to hereditary predisposition or sedentary life, or to no ascertainable cause; (2) from the endless forms of digestive disturbance; (3) in patients weakened by neurasthenia or anemia; (4) in the corpulent. In all these the mechanical treatment is the most certain means of cure.

Gynecology and Obstetrics.

BREECH PRESENTATION: RUPTURE OF CHILD'S PERINEUM BY MIDWIFE.

Sawicky (Przeglad Chirurgiczny, vol. ii, part 3, 1895) writes of a breech case which the midwife mistook for a vertex presentation. After a few hours the child was delivered, the breech coming first. A rupture of

the perineum was detected. A month later Sawicky was consulted, as the child suffered from incontinence of urine and feces. There was the usual eczema, with cystocele, cicatrization of the perineal rent, a very patulous vaginal opening, and slight prolapse of the rectum. The anus was involved, the rent extending through the external sphincter. The eczema was cured and then the parts repaired by Tait's operation. The anterior part did not unite, so the vulva still gaped while the posterior part of the perineum and the anal ring assumed their normal condition. There was no more incontinence of urine or feces. The mother had been normally delivered eight times before, the vertex presenting on all those occasions. Laceration of the child's perineum occurs sometimes in breech presentations—which was not suspected at first in this case owing to the previous history—through the child's anus being mistaken for the mother's os uteri, and dilated in consequence by the finger of the midwife.

TWIN LABOR: PLACENTA PREVIA CENTRALIS.

Kahn (St. Petersburger Med. Woch., No. 16, 1895) relates a very complicated labor. The patient was 23 years old. She had borne one child. Her last period was in May, 1894. Three floodings occurred. On October 30 Kahn found her very anemic. The uterus reached to the umbilicus, and was contracting; fetal heart sounds were audible; the placenta was presenting. At 11 P. M., severe hemorrhage having come on, in spite of hot irrigations and the tampon. delivery was hastened. The os already admitted three fingers. In attempting to separate the placenta from its attachments some time was lost, as there were firm adhesions. Kahn therefore pushed his hand through the middle of the placenta. A great quantity of liquor amnii escaped. A male fetus, seven inches long, was then extracted with ease, the head presented. Then the feet of a second fetus could be felt through a second bag of membranes. Hemorrhage ceased for awhile, and restoratives were given. A few hours later, as the patient looked very ill, delivery was hastened. The first placenta still adhered firmly, and had to be separated—a task which proved very difficult. Then a dead female fetus, smaller than the first twin, was extracted. Lastly, the second placenta, adherent to the posterior part of the uterine cavity, was detached with considerable trouble. The cavity was packed with iodoform gauze. The patient rallied, and was warned not to get up for three weeks. On the eleventh day she stepped out of bed and immediately fainted. On recovering, she noticed that her right arm and leg were weak and she could not speak easily. Next day coma set in and ended fatally.

TUBAL ABORTION AND OPERATION.

Piering (Centralbl. f. Gynak., No. 29, 1895) recently exhibited before a German society a specimen illustrating tubal pregnancy which had ended in abortion at the fourth week. The ovum was discovered, quite uninjured, amongst clots in Douglas' pouch, and the ampulla of the tube showed, under the microscope, all the signs of ectopic gestation. Though the abortion was complete, internal hemorrhage was so severe that an operation had to be performed. That patient recovered. This case proves that surgical interference is needed in complete, just as in incomplete, tubal abortion.

PUERPERAL TETANUS.

Walko, of v. Jaksch's clinic (Deut. Med. Woch., September 5, 1895) relates a case occurring in a woman, aged 23, and treated by Tazzoni's antitoxin. The disease began about ten days after delivery with sudden trismus. On admission there was marked spasm of the jaws and the head was drawn back. From time to time there were general spasms. Vaginal examination by Rosthorn revealed little of importance. The body of

the uterus was dextroverted. There was a leceration of the cervix, which bled when touched. There was very little secretion from the uterus. The first injection of antitoxin was given on the day of admission. On the following day there was some improvement, but twenty-four hours later the patient relapsed, and died on the next day. Eighteen injections of 0.2 g. of the antitoxin were given at intervals of about five hours. A considerable leucocytosis was observed. The bacteriological examination of the lochial secretion, blood, colostrum, etc., gave negative results. In spite of these negative results as regards the presence of the tetanus bacillus or of tetanus-producing properties in the secretions, there was no question of the nature of the disease. In addition two other cases of puerperal tetanus occurred about the same time. Extirpation of the uterus was carried out, and the tetanus bacillus was found in the lochial secretion. Both cases followed a rapidly progressive and fatal course. The author then refers to the antitoxin treatment of tetanus and to the divided opinions as to its value. Mostly improvement has been noted at varying intervals after the injections. Beneficial effects have been very rare in severe forms of tetanus. The author says that in the majority of cases tetanus is not a fatal disease; according to Albertoni, 136 out of 176 recovered, namely, 78.9 per cent. It is a question as to whether in severe cases even larger doses should be employed. The treatment should be begun early. A difference in the properties of the antitoxin obtained from different sources is possible.

EDEMA AND APOPLEXY OF OVARY FROM TORSION.

Potherat and Lenoble (Bull. de la Soc. Anat. de Paris, vol. ix, part 13, 1895) examined two uterine appendages removed for what appeared to be left salpingitis and retroflexion. The left ovary was as big as a moderate-sized orange. Its pedicle was twisted three turns from left to right, but not firmly; the Fallopian tube was still permeable. On section, the swelling of the ovary was seen to be due to great edema, with extensive extravasations of blood. The essential ovarian tissue had disappeared. At points there were collections of new growth which the observers considered to be myxoma. The right ovary was as large as a small Tangerine orange; its pedicle was not twisted. Unlike its fellow, it contained a few Graafian follicles, but none held ova. There was no effusion of blood, but the ovary was edematous, and appeared to be the seat of myxomatous infiltration.

TRANSLATIONS FROM

Foreign Exchanges

BY DRS. CHANDLER AND DAVIDOW.

Conredi (Acc. medico-fisica, Florence) reports on experiments with the alkaloid of hymenodyction excelsum (cinchona excelsa).

The alkaloid has a very remarkable and energetic action upon the heart. Frogs were used for experimenting and their hearts isolated. The addition of 0.02 gm. of hymenodyctionin to 100 gm. of the circulating fluid causes first a short phase of irregularity in the heart's action, which is followed by a suddenly appearing diastolic pause. If now the usual circulating fluid is allowed to flow through a noticeable showing and strengthening of the heart's action, followed finally by a return to its normal action, is observed. Subsequent repetition of the experiments causes a repeating of the phenomenon as just described. If, however, the experiment be performed too often, a cessation of ventricular systolic action takes place while the auricles are relapsed, but still continue contracting. At the first mentioned, temporary, diastolic cessation of the heart's motion, the auricles are enormously dilated, while the ventricles show vermiform motions. The alkaloid is a nerve poison, rather that one directly affecting the heart, and shows certain analogies with the action of digitalis.

THE STERILIZATION OF WATER BY CHEMICALS.

Sacerdoli, of Turin, has made a large number of experiments to test the results reported by other investigators and with the following results:

Permanganate of potash 1-5 cg. pro liter of boiled water, which was subsequently infected with the bacilli of typhoid and of cholera, showed a sterilizing action only in the upper layers, while the bacteria continued to develop in the lower portions.

The action of chloride of calcium was more marked, but it must be remembered that the typhoid bacillus is unaffected by it. The addition of 0.25 gm. ac. tartaricum, or the same quantity of ac. citricum to the liter of water kills the cholera bacillus in ten minutes. To destroy the bacillus of typhoid a longer action and a more concentrated solution is necessary.

Ol. anisi is a good corrective of bad water; this destroying the typhoid bacillus inside of ten minutes.

Pinna — Pinlori reports on the logical examination of 50 cases of endometritis. The deductions were as follows: Aside from tubercular and decidual endometritis, all other forms may be divided into three chief groups, namely, e. glandularis, e. interstitialis and a composite form e. glandulo-interstitialis. The erosions of the cervix are not true ulcers but new growths springing from the substitution of cylinder epithelium for the normal pavement epithelium. The local treatment of the same is of little value so long as the deeper lying chronic inflammatory processes are not combatted.

The mucous polyps of this cavity of the uterus are the expression of a circumscribed e. glandularis chronica. The true adenoma is in no relation to it. The circumscribed fibromyomata no matter what their situation, lead to an e. glandulars or glandulo-interstitialis tropica diffusa.

The diffuse uterine myomatosis is accompanied by an e. interstitialis atropica.

Myomata, which projects into the uterus, lead to atrophy of the superjacent mucosa, and to a mild glandular hypertrophy of the remaining uterine mucous membrane.

Giacosa (r. accad. med., Turin) reports on a number of experiments to fix the minimal lethal dose of snake poisons and also in the great intensity of the same.

He succeeded in rendering animals immune to 250 times the minimal lethal dose.

The serum of snakes itself has, even in a dried condition, an immunizing action. The protective action of the serum of the animals, who have been immunized against the action of the snake poisons is transmissible.

Lucatello and Antoini (r. accad. di med., Genua) have experimentally proven that vesicants increase the antibacterial action of the blood-serum, and that they increase the number of lencocytes. The use of epispastic remedies in infectious processes, as has long been customary in Europe, gets a theoretical basis through these experiments.

Dr. E. Cervello, in La Garrulita, reports a case of peculiar uterine fibroid.

On the 17th of July last, a patient was sent to the hospital for extirpation of the tumor. Family history good; age 47; three sisters older than herself, who had always enjoyed good health. Had noticed increase in size of abdomen about two years and six months. Latterly, it had increased rapidly. Dr. C. proposed giving a clinical lecture on the case when the physician, who had referred it to him, was present.

Scarcely had the patient been put in position, and the few remarks introductory to an examination made, than that fibroid calmly turned a somersault. Upon this the physician who had sent in the case disappeared, the students wept and the operation was postponed.

THE ETIOLOGY OF DYSENTERY.
By A. Celli and R. Fiocca, of Rome.

An examination by the authors of 62 cases of typical dysentery from Italy and Egypt, gave the result that the amoebae and especially the amoeba coli could not in all cases be considered the direct cause of the disease, for there were cases of epidemic, endemic and sporadic dysentery, with absolutely no amoebae. Again, amoebae may be destroyed by heat, and only the bacteria and its toxins experimentally administered, and yet a dysentery be the result. The amoeba coli is also often found in the intestines of perfectly healthy persons, both alone and together with other amoebae. In the case of patients suffering from dysentery the bacillus coli communis is usually found together with a transitory variety, which resembles the bacillus of typhoid. These again are often accompanied by streptococci, occasionally also by a proteus. The latter seems to change the b. coli commun. into the variety b. dysenteriae and it is possible to experimentally cause dysentery with them. This variety furnishes an unusually poisonous toxin that may be precipitated from the bouillon culture by alcohol, and which causes death in animals with great rapidity and without perceptible changes in the intestinal canal.

PERVERTIS ET INVERTIS SEXUELS; LES FETISCHISTS.
By P. Garnier.

Since the publication of Krafft-Ebing's work on "Psychopathia Sexualis," any amount of information on this subject, which had been pigeonholed as uninteresting to the general practitioner, is being brought to light.

Garnier (Ann d'Hyg.) reports the following cases of hetero-sexual fetischism:

1. Victor V., bad heredity, eccentric, loved silk since his 5-6 year. As child, admired to play with silk dolls, collected silk rags in the workrooms of dressmakers, dreamed of women clad in silk and owned a silk skirt, which he put on every evening.

Simply touching silk gave him the greatest pleasure. Placing silk on the abdomen caused ejaculations.

In crowds he would always rub himself against ladies dressed in silk and this caused his arrest on suspicion of theft.

2. A baker with bad heredity was arrested for cutting pieces out of ladies' cloaks.

For 8-10 years he had adored woolens, the contemplation and fondling of which, when worn by women, caused him erections and seminal emissions. In his room was found an enormous collection of bits of woolen cloth that he had cut from dresses.

3. Laurent P., Government employe, heredity bad and showing symptoms of degeneration, was known as an admirer of wet-nurses and nursery-maids, whom he always frequented and admired. On account of this continual molestation he was sent to the "Infirmerie Speciale." This patient admired the costumes as a whole, and not the separate parts. He had no sexual desires at the time, but merely enjoyed being in company with the nurses, while at home the thought of their costumes would cause erections and ejaculations.

4. A butcher, who on his admission wore female undergarments, felt in his tenth year an uncontrollable impulse to put on the chemise of his elder sister.

Yielding to this desire, which was often possible in his youth, caused erections with emmisio seminis. Upon becoming his own master he bought a complete female costume. Ruined financially by its cost he attempted suicide. Homosexual inclinations were entirely wanting. In the asylum he begged to be allowed to wear female clothing.

5. An official, aged 26 years, rather feeble minded, with a brother an epileptic, was arrested in a crowd for cutting several locks of hair from a young lady.

Three notes containing locks of hair were found in his pockets.

From his twelfth year he had been a worshiper of female hair. At the age of 17 he had been arrested and

sentenced for crowding up to a young girl and toying with her curls. The outlines distinctly visible through his clothes were the cause of the verdict.

6. The last case of Garnier's was an eater of human skin who was depicted as follows: "Eugene L, was caught cutting a large piece of skin out of his left arm.

L. was the son of an epileptic father and brother of a feeble-minded sister. Up to his seventeenth year there was marked incontinence of urine and his nature was brutal.

He had been turned out of school several times on account of stubbornness, although very religious and much given to reading pious books.

In his 12-13 year the sight of a fair haired, rosy cheeked maiden caused the thought that he would dearly like to bite a piece out of her skin and eat it. The thought became a fixed idea, and he bought a sharp pair of scissors in order to be able to accomplish his end more quickly.

He had often followed young girls for hours together, and refrained from attacking them only because he plainly saw that he would not have time to carry out his plan as far as swallowing the flesh.

Since a year, when unable to master his craving for young girls' skin, he had turned his fury against himself, and had cut the tenderest possible bits of skin from his own body and had eaten them, forcing himself to imagine that they were from a young girl. This act would cause him great sexual gratification. On his trunk and limbs there were many scars and some quite deep ones. This self-mutilation caused him the most acute pain, but this was surpassed by the intense psychic ecstasy. In the asylum he attempted suicide.

I wished to have an abstract from Wieworowski's article on the "Treatment of Condylomatons Syphilis with Blood Serum of Patients with Syphilitic Gummata," ready for this issue, but my Russian had gotten so rusty that I was obliged to give up the idea and fill in with other matter. It will be in these columns later.

CHANDLER.

Book Reviews.

Les Miseres De L'Enfance. Par Le Dr. John Lemoine, officer de L'Acadamie. A. Maloine, Lib. Medicale, 95 Boulevard St. Germain. Prix 1 fr. 50.

The author of this brochure presents in a concise and clear form, within a very narrow compass, a synopsis of most of the maladies and accidents of infancy and childhood. While there is much in it of interest and practical value to the physician, it is evident from the scope and manner in which it is presented it is rather intended as a popular contribution for domestic use.

As such, it is certainly comprehensive and useful, though we must take exception to the general scheme of placing in the hands of the laity remedies of great potency, which should never be administered except by skilled and experienced hands.

Miscellany.

TUBERCULOSIS AND THE LIBRARY.

The statement has passed current that a librarian of the city of Omaha, Neb., recently died of tuberculosis contracted from books which had been infected by consumptive patients. This report has naturally renewed the discussion regarding the danger of infection by means of public libraries. There are many physicians who are aware of cases in which some of the more actively contagious and portable diseases have been communicated by means of books, though not, perhaps, by the books of a public library. We recall, for example, instances in which scarlet fever was apparently communicated in this way. Practical experience, however, in the large cities, where there are well-patronized public libraries, seems to show that little danger is to be apprehended from

this source. This is particularly the case in cities that are supplied with proper health boards and with modern sanitary methods. The danger, so far as it exists, could only apply to a few diseases of the more active kind, like scarlet fever and perhaps small-pox. Regarding this latter disease, The Evening Post quotes the remarks of a Boston physician, who says that he has never known an instance where there were any grounds for believing that contagious diseases were carried by books in circulation in the public library. In the year 1872 a severe epidemic of small-pox prevailed in Boston, and the physician in question saw every patient and traced, where possible, the history. In no instance did he connect the infection with the use of books. As the circulation of this library is more than two million volumes a year, this evidence is very convincing. We understand, also, that the American Library Association has twice investigated the subject of books and contagion, and in no instance was it able to trace the spread of disease to the circulation of library books. The American Library Association might, perhaps, be considered a body not entirely without bias in favor of circulating books, but its investigations were apparently thorough.

Despite all this, it would be wise to exercise a sanitary supervision over the circulation of books. Their disinfection, when they have gone into neighborhoods that are at all suspicious, would be extremely easy, and the co-operation of a public library with the sanitary officers of the city might result in good to both parties and benefit to the public.—N. Y. Med. Record.

HONEY IN ERYSIPELAS.

Dr. C. E. Hayward, of Cropsey, Ill., writes: "Several years ago, while treating some bad cases of erysipelas, a lady asked me why I did not use the remedy they used in Montana. I asked her what that was; she said honey. I did use it and found it very effective, and since then have used it in every case of erysipelas on any part of the body. My first treatment is the external application of honey. I shave the head and face if necessary, spread the honey thickly on cloth, cut holes for the eyes if the face is the part affected, and change the application every three or four hours. I have never had it fail to relieve the pain, heart swelling and nausea and to shorten very much the attack. I also give internally the usual remedies for reducing the fever and stimulating the emunctories. Three or four days usually suffice to bring about convalescence under this treatment. I could report numerous cases, but would rather every physician would give it a trial, and I am sure he would find a practical addition to his armamentarium."—N. Y. Med. Record.

A NEW TREATMENT FOR FEVER.

A new curative treatment has been discovered by a Transvaal doctor. Having noted the fact that milk absorbs poisonous germs from a bucket, he decided that it might be possible to turn this germ-absorbing power to a therapeutic account. He put his ideas to the test, and now asserts that he has cured persons of small-pox, fevers, diphtheria, and other maladies by simply wrapping them in milk sheets. The patient is laid on a mattress covered with blankets, and is packed in a sheet just large enough to envelop the body. This sheet has first been saturated in a pint and a half of warm milk, and is applied to the body without wringing. After this treatment, which lasts about an hour, the patient is sponged with warm water, or is put into a warm bath.—Medical Press and Circular.

VACCINATION IN WHOOPING-COUGH.

G. Cavalieri (Gazz. d. Osped., June 1) reports that in 1894 he had more than 200 cases of pertussis under treatment. Almost all therapeutic measures proving useless it occurred to him to try the effect of vaccination. He vaccinated more than 100 children suffering from whooping-

cough, but only in 64 of these did the vaccine take. Of the 64 only one, a baby of four months, died, whereas before the vaccine was used there had been many deaths. The vaccination had a favorable effect on the course of the disease, both diminishing the violence of the paroxysms and shortening the duration of illness, the vaccinated cases recovering in from three to three and a-half weeks, while the unvaccinated cases either died within the same period or took eight or nine weeks to recover.

UNUSUAL SURGICAL CASES.

BY JOHN HOMANS, M. D.

(From Boston Med. and Surg. Jour., August 15, 1895.)

STONE IN BLADDER IN A GIRL OF FIVE.

Nucleus, a very sharp-pointed pin, removed by lithotomy through the base of the bladder. Cure.

I saw on the March 1, 1894, in consultation with Dr. Hazelton, at Wellesley Hills, L. L., a stout, healthy girl, who had been suffering for some weeks from frequent and painful micturition. On examination with a catheter, a stone was felt in the bladder, and soon afterwards the patient entered the Massachusetts General Hospital Urination was very frequent and agonizing, and was accompanied by screams. The urine contained pus, a large trace of albumin, uric acid, urate of ammonia and triple phosphate crystals. On March 23 the child was etherized and an attempt made to dilate the urethra and crush the stone with the lithotrite; but the stone was large, the bladder small, and it seemed to me more intelligent and more surgical to cut through the base of the bladder and remove the stone there. I was very glad that I did so, for the pin that was the nucleus of the stone might have been a difficult thing to have pumped out in the evacuator, and if it had not been removed another calculus would have formed The vagina was only large enough to admit my little finger, and using the finger as a guide I cut upwards through the base of the bladder with a curved sharp-pointed bistoury upon the stone, and removed it with forceps through the opening. I washed out the bladder, and tried to sew up the vesical opening; but the vagina was so small that I could not pass the sutures intelligently, and I contented myself with placing a Sims self-retaining catheter in the bladder. The stone was ovoid in shape, one and a half inches long by one quarter of an inch in width, and weighed one hundred grains.

I should not have troubled the society with the report of the case except for the very remarkable nucleus that the stone presented, and which accounted for the very frequent and painful attempts at micturition. From the smaller end of the stone projects the very sharp and polished point of a brass pin, and it was the pain caused by the pricking of the bladder, particularly when it contracted, that had given rise to the suffering and screaming. How the pin got into the bladder is a mystery, but probably the child herself inserted it in some way. In the course of a few months the opening spontaneously closed, and the child is now (April, 1895,) robust and well.

LAPAROTOMY FOR ONE HUNDRED AND TWENTY CHERRY-STONES AND SEVENTY PRUNE STONES IN THE SIGMOID FLEXURE.

In the spring of 1893 Dr. Norris, of Cambridge, sent to the hospital a man 27 years old suffering from frequent attacks of constipation and pain in the abdomen, which no treatment had relieved. He stated that ten years before, while in Denmark, he had eaten a grent number of cherries and prunes and had swallowed the stones, and that none of them had passed through his bowels. He had consulted many physicians, but his statement about the stones had never been credited. On etherization a tumor was found in the right iliac region; and on succession the rattling of small, hard bodies was heard. The abdomen was opened over the tumor, and the greatly dis-

tended sigmoid flexure came into view. Its walls were greatly hypertrophied, and the stones were painly felt and heard within it.

In the left and central pelvic cavity was a hard and flattened tumor, surrounding and involving the lower part of the sigmoid flexure and the upper part of the rectum, estimated to be about seven inches long, by three inches wide, and two inches thick, and was considered by me to be a malignant growth involving the sigmoid flexure and its surroundings. It was impossible to make a resection. The bowel was brought out through the wound, a glass rod was passed beneath it, and the external wound closed above and below the gut. On the third day, that is, forty-eight hours later, the gut was opened and several stones came out. Much fecal matter and some stones were found at every dressing of the wound, and in the course of four days one hundred and twenty cherry-stones and seventy prune-stones were found. They were very black in color, but were otherwise unaltered.

I saw the patient in December, 1894, twenty months after the operation. He had gained flesh and strength, and was working every day. He uses a contrivance of his own to retain his feces.

I will not report the case more at length to-night, as it has been already published in the Annals of Surgery for 1894, Vol. XIX, p. 672.

INDICATIONS FOR CHOLOCYSTECTOMY.

This operation is warranted in all cases in which there are such changes in the walls of the gall-bladder as to interfere with its functions; as in empyema or tumor.

Cholocystectomy is also indicated in all cases in which the gall-bladder is packed with calculi and its duct is impervous.

Cholocystectomy should be preferred, unless we are assured that the organ is wholly useless.

Choloclochotomy and a cysticotomy are indicated for stone in the duct, and these may be rendered more certain than results by the acid of cholelithotripsy.

The drainage of the subhepatic region provides us with the best guarantee of success.—Revue Med. de L'Est, Jan. 15, 1895.

TREATMENT OF REBELLIOUS NEURALGIA OF THE TRIFACIAL NERVE BY STRETCHING RATHER THAN BY RESECTION.

Israel and Thiersh have lately had such success with trifacial tension of the trigeminus that they have entirely abandoned section of the nerve. They have had several cases, with no failures in any, except one, in which there were sclerotic changes in the nerve elements.—Deutsche Med. Woch., No. 52, 1894.

LAMINECTOMY IN FRACTURE OF THE VERTEBRAE.

Saltzer reports the case of a painter who, while on a high staging, fell to the ground, but he was able to rise and resume work.

Five weeks later paroplegia gradually developed. For three months rest, extension, massage and electrization were faithfully tried without effect. Over the tenth dorsal vertebra a mass was felt, and an operation was decided on. He operaated en deux temps; first making an incision from the sixth to the twelfth dorsal. A large abscess was opened and drained. Eight days later he removed the arcs of the tenth, ninth, seventh and sixth dorsal, without finding any special spinal lesion. He now extended his bone section to the eleventh and twelfth, when he discovered a dislocation with a narrowing of the canal. In spite of this vast sacrifice of bone and consequent weakening of the spine, by the aid of a strong corset the patient was able, after paralysis passed off, to move about and fully recovered.—Annales Des Scies. Med., Juillert, '95.

COLLEGE OF SURGEONS ENGLAND LIBRARY 18 NOV 95

The Times and Register.

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Original.

PYEMIA AND SEPTICEMIA IN THEIR SURGICAL ASPECTS.

BY J. McFADDEN GASTON, M. D.,
Atlanta, Ga.

During the past decade my views have been presented to the profession on sundry occasions touching the important role of septic processes in the physical organism. There is nothing, in my estimation, connected with pathology of more pervading and far-reaching influence than the grave consequences of general contamination.

The insidious progress of infection of various forms in undermining and disintegrating the vital organs appeals to the medical philosopher and the surgical pathologist for the most profound consideration. A thorough comprehension of the normal condition of the various structures which enter into the composition of the different organs of the body is a prerequisite for understanding their disorders and diseases, and some familiarity with biology and histology is, therefore, essential for entering upon an investigation of septic troubles.

The general term, blood poisoning, has been applied to a great variety of contaminations of the organism, and while pyemia is regarded as the result of the absorption of pus into the vascular system, septicemia implies infection from different sources. It is not expected that my views on these departures from the normal condition of the organization shall correspond entirely with the established pathological tenets of our text books, or with the doctrines recognized as orthodox by my intelligent colleagues who constitute this society. But the agitation connected with the principles involved in pathology has always led to practical results of great importance, and my object in this investigation is to elicit discussion on the part of the members of this body of the points presented for your consideration. I do not claim to be able to instruct you in regard to these matters, but hope to receive useful knowledge from those who have had experience in treating this class of cases. It is not simply commentation I seek, but it is criticism, which may prove instructive to myself and others, that is desired in discussing this paper.

In overhauling my individual experiences as to pyemia and septicemia and comparing them with the observations of others touching their medical aspects, I have become satisfied that there are many features of their surgical aspects which can appropriately be embodied in a paper at this time. It has occurred to me, therefore, that the present occasion may prove opportune for bringing out this phase of the subject, and my contribution upon pyemia and septicema to the "Twentieth Century Practice of Medicine," not being expected until that publication is far advanced, I trust this may prepare the readers of that work for a better comprehension of the principles involved in this investigaton.

The practical bearings of pyemia and septicemia have cropped out in various forms connected with surgical work, and more especially in what has been designated as antiseptic surgery. This has been develop-

ed conspicuously by Sir Joseph Lister's process of treating surgical cases with special regard to the presence of septic features in the structures.

His conception of the surroundings of a patient being attended with contaminations extending to the field of operation led to various antiseptic devices, and especially to securing cleanliness. Out of the vast array of elaborate dressings which were inculcated, little remains to-day of Listerism excepting the scrupulous avoidance of filth of every kind, constituting asepsis. In so far as the experience of Mr. Lister in subsequent years may guide surgeons in the use of germicidal agents for operations, all are aware that he now prefers carbolic acid washes to those of corrosive sublimate, and that they are employed with great caution.

He confines the application of antiseptics to septic conditions of the parts involved and adheres mainly to cleanliness in the physiological state of the tissues.

Much credit is due to Sir Joseph Lister for drawing the attention of surgeons to the importance of avoiding contaminations by filth of all kinds, but the large following he had formerly in antiseptic surgery has gradually decreased, until the vast majority of surgeons and gynecologists of the present day rely exclusively upon aseptic measures in normal tissues.

Among those who have taken a part in the study of bacteriology as allied to surgery, I have watched with great interest the development of the germ theory of the origin of diseases, and yet have not been so carried along with the current of opinion as to ignore entirely the fact that thus far it has not met all the requirements for comprehending pathological conditions.

Without discrediting scientific experimentation,there is quite sufficient evidence that grave mistakes have been made in the mode of investigating the relations of cause and effect, connected with the presence of microbial element in the different parts of the organism. That some diseases are uniformly accompanied with bacilli of a definite kind, does not suffice to give a final decision as to the etiological factor in these discases, and much less is it a conclusive indication for the therapeutic measures which are required for the relief of such a disorder.

The prestige of antiseptic surgery was such ten years ago that a surgeon who dared to neglect the recourse to germicidal applications in his operations was styled an old fogy and unworthy of recognition by those of the advanced antiseptic practice. The zeal in propagating Listerism reached such a point that a surgeon who might have an untoward result without observing its tenets, would have had the testimony of its defenders against him in a suit for malpractice, and he would have been placed in a most embarrasing attitude before the medical world. But a change has come over the spirit of the surgeon's dream at the present day, and instead of being on the defensive, the opponent of germicidal washes in normal structures is now occuying the offensive position. The best class of bacteriologists to-day are supporting him in condemning all poisonous applications, excepting only those cases already contaminated, which call for correction by antiseptics. In these alone is the so-called antiseptic surgery warranted.

The high authority of the Johns Hopkins Faculty, headed by the distinguished bacteriologist, Dr. Welch, is arrayed against the employment of any germicidal or prophylactic solutions in operating upon normal structures, and sterilized water only is used in washing fresh cut surfaces. In the very instructive discussion upon radical operation for hernia before the Southern Surgical and Gynecological Association, at Louisville, Dr. Howard A. Kelly criticised the technique of a distinguished colleague, who thought it proper "to conduct the entire operation under irrigation, with a weak sublimate solution." "I would urge him," he stated, "to abandon the use of solutions of the bichloride of mercury. The value of the inhibitory power of this drug over germ life is more than counterbalanced by its necrosing ef-

fect upon the tissues." Notwithstanding the most pronounced expressions of those best qualified to determine upon the injurious effects of irrigation with mercuric solutions, it is found that some members of the medical profession continue to use them from force of habit, and they must learn by bitter experience to abandon the error of their ways.

The elementary and fundamental question in regard to the animal or vegetable nature of the germs of disease occupied bacteriologists for many long years; and though it has been finally accepted, as the established doctrine, in favor of germs of vegetable origin we cannot rely implicity upon the results of this investigation. The division of micro-organisms into the coccus, baccillus and spirillum, gives the starting point for a multitude of subdivisions; and the vocabulary is constantly increasing as new workers come into the field. A recent writer thinks it may eventually become possible to neutralize the effect of the most deadly microbe by generating a variety inimical or destructive to it. By this achievement bacteriology is claimed to have taken a new departure, of which it is impossible to forecast the consequences in the future.

It is evident that many elaborate disquisitions on this subject are not based upon a personal knowledge of the facts, and the authors run into inconsistencies in explaining the outgrowth of their theories. It may turn out that my hearers will place the present writer in the same category before reaching the end of this paper.

The relations of bacteria to diseased processes in the organism depend to a very large extent upon the predisposition of the structures to take on disease, and upon the development of leuecocytes which arrest the morbid element. It is held generally by bacteriologists that the predominance of phagocytes in the tissues, which may be involved, prevents the hurtful influence of bacteria and that the phagocytal process serves as a prophylactic against structural disorders.

Indeed it is questionable whether active living micro-organisms cause disease, and it may be fairly inferred that the loss of vitality in the micrococci is the source of trouble in most cases of morbid developments.

This lends force to the view that ptomaines have an important role in the disorders of the physical organization, and the impression has been growing that this is the septic element in the suppurative and destructive results of any contamination from without. It is evident that ptomaines contribute chiefly to the development of septicemia in most cases.

A ptomaine is defined by Foster to be "an alkaloid formed as the result of putrefaction or abnormal fermentative changes taking place in an organ after death or as a consequence of morbid action during life. Ptomaines are probably in all cases due to the decomposition of putrid or other organic compounds by bacterial action. Some ptomaines are poisonous, others are physiologically inert."

According to the same authority, Encyclopedic Medical Dictionary, septicemia is a constitutional, generally acute disease, popularly called blood poisoning due to the absorption of various putrid substances into the blood, which are supposed to act as ferments, and so to change it that it cannot fulfill its physiological functions. The lymphatic infection is a form of septicemia in which the infecting material has entered the circulation by way of the lymphaties; it is rapid and severe in its course and characterized by effusions in the several cavities. Peritoneal septicemia is a form that may occur and prove rapidly fatal in consequence of a wound of the peritoneum with or without peritonitis. Puerperal septicemia is due to septic infection in the puerperal state. Venous septicemia is that in which infection proceeds from a putrid thrombus as in uterine phlebitis.

The most serious form of septicemia which is encountered in surgery is that in which the toxic influences extend to the nerve centres with but little local manifestations in the tissues involved, excepting the loss of

vitality. This overpowering impression prevents the ordinary inflammatory developments in the adjacent structures, and instead of finding hypermia of the area involved, a necrosed condition is observed which is speedily followed by general collapse with subnormal temperature. This insidious progress of the toxemia may escape attention at the outset and only become notable by the gravity of the symptoms indicating an early fatal termination.

It may be inferred in these cases that such a transformation is produced by the development of ptomaines in the part affected that mortification ensues; and although the patient does not suffer pain, this lethal impression is propagated through the nerve centres to the vital organism.

While stimulants of the most energetic character are indicated under such circumstances, they are found insufficient to avert the death of the patient.

In that class of septic manifestations known as dissection wounds the absorption of the decomposed elements from a dead body presents in a typical form that quality attributed to ptomaines. The word implies a concentration of malignant death-dealing energy and its destructive force is exhibited by the smallest appreciable particle of the ptomaines which may enter into the organism. It possesses a most extraordinary property of a toxic nature, which diffuses itself through the lymphatics, and results in the disorganization of remote as well as neighboring structures. The most serious consequences ensue from the slightest abrasion of the cuticle, which admits of absorption of the toxic element, and it is rare that its progressive work of destruction can be arrested without disintegration of the tissues involved. Those who witnessed the influence of dissection wounds before the introduction of antiseptic injection of dead bodies, need not to be reminded of the grave results, and those who incidentally have met with instances in latter days, must be profoundly impressed with its terrible agency for disorganization of vital structures.

(To be continued).

A PRACTICAL STUDY OF THE BLOOD AND THE CIRCULATION, WITH A HISTORICAL REVIEW OF THE SUBJECT AND ITS BRIEF CONSIDERATION FROM THE STANDPOINT OF ITS CHEMICAL COMPOSITION, ANATOMICAL STRUCTURE, AND PHYSIOLOGY; INCLUDING CLINICAL STUDIES, AND EXPERIMENTAL RESEARCH ON THE LOWER ANIMAL.

BY THOMAS H. MANLEY, M. D., NEW YORK.

Continued from last number.

PART VI.

THE VENOUS SYSTEM AND SOME OF THE PECULIARITIES, IN FUNCTION AND STRUCTURE.

It has been pointed out that in structure and function the venous conduits are totally different from the arterial. It has been noted, too, that except in the main trunks little or no muscular tissue is found in their walls.

In the veins of the brain the middle tunic is wanting. The systemic arteries discharge their full functions when they send their blood into the capillaries, when their part is performed. But, in the hepatic circulation we witness the veins perform the part of the arteries. The portal vessels gather their contents from the chylopoietic, visceral capillaries and send them into another system of capillaries in the liver. In other words, here we find a system of vessels commencing in capillaries and ending in capillaries and in this connection it would be interesting to know in what possible manner cardiac contraction can influence this

territory of the circulation, which has to do exclusively with the chemistry of digestion. The capacity of the venous system varies very considerably, and will tolerate artificial distension with remarkable impunity as, for example, in the anemic state, when large quantities of saline and other solutions may be injected into it often with advantage.

Unlike the arterial current we see here that in various regions it receive sheterogeneous, or foreign materials, with various admixtures of blood and other elements, widely varying, in physical properties and chemical characters as from the thoracic ducts above, the hepatic circulation into the cava, and the contents of the hemorrhoidal vessels into the iliacs.

The head, neck extremities and abdomen have a duplex system of veins. It is rather remarkable that no such provision is made for the upper segment of the trunk, the thorax; nor do we observe that anatomists call attention to this seeming singular defect. With the brain, in the event of compression or acclusion of the sinus, leading to a cessation of motion through the internal jugular, an ample provision is made for escape, through the vertebrals, external jugular and others. An overstrain on a vema-comes of the extremity is readily relieved by the numerous capacious peripheral vessels.

In the abdomen, when the cava is seriously impinged on by hydrostatic pressure, or a neoplasm, relief comes through a dilalation of the superficial epigastic veins. A little more than a year ago a most unusual case came under my care, illustrating the enormous expansion that the hypogastric veins may undergo when there is a fixed barrier in the path of the deep venous flow. My patient was a young man, who was suffering from multiple aleno-varcome, with several large masses in the retroperitoneal tissues, quite closing the inferior cava. Some of the branches of the external epigastric vein were enlarged to the size of the femoral, and when I accidentally opened one the blood gush for an instant was enormous. We will often witness a similar state, though not so well marked, in a trophic cirrhosis of the liver, when the porgal circulation is impeded, and ascitic fluid compresses the deep veins.

We find then collateral reservoirs are amply provided for the venous circulation in the brain the extremities,and all chlopoietic organs; but for those great central organs the heart and lungs themselves—the practical source of the circulation—without any subsidiary channels of relief. When sudden congestion seizes on the lungs, when the crippled right heart strains and struggles with its overcharged burden, it does seem reasonable to believe that if there were thrown over the chest-walls a generous plexus of veins, in immediate relation with the right auricle, the strain might be eased, and that dreadful state of asphyxia moderated. The veins are fed by vitiated blood, and are not, like the arteries, provided with a perfect physiological equipment for their nutrition and preservation; therefore, why we must regard this as a defectively organized system. Many of the larger veins have no independent sheaths, no vasa-vasorum, and no comrade veins; but, parasite-like, derive their sustenance from the connective tissues or glandular elements through which they course. This system is not only the most subject to incidental, pathologic changes, but in various territories is prone to early degeneration. It also is defectively organized. Scarcely is the body matured and the specialized functions called into action before we are conscious of this fact. Varix makes its appearance always in those situations, subject to the influence of gravity. When man alone was ordained to carry his body upright it would appear that his vascular apparatus was not adapted to this attitude, and he pays the penalty for this privilege by being early in life the victim of infirmities arising through those blood vessels, incapable of performing their functions. None of the lower animals are subject to varix. But in man it is so general that there are probably few who do not some time

in their lives suffer from varices, either of the vulva, scrotum, rectum or lower limbs.

The vessels spread, their inner walls give way, the valves leak or are torn away altogether; inflammatory changes set in with fibrosis, calcification, the thrombosis, or total obliteration of their lumina. Any great strain, as the parturient act, or violent exercise, hastens the evolution of those states, leading to venous disorganization. Since the bicycle has come into such general demand I have seen more saphenous varices than ever before. But the curious and remarkable thing in this connection is that under these circumstances we have no evidence of arterial integrity being disturbed.

(To be continued.)

Society Reports.

CLEVELAND MEDICAL SOCIETY

REGULAR MEETING, SEPTEMBER 13, 1895. REPORT OF COUNCIL.

Dr. Wirt—About the middle of August the suggestion was made to the council, to some of its members, that the next quarterly meeting we have be devoted to a consideration of sanitary science, and that it be a public meeting. After interviewing a number of physicians as to the feasibility of the idea, and it being approved by all those I saw, I called the council together. An outline of a programme was submitted to the council and was heartily indorsed by them. To carry out this idea a special committee was appointed on programme, on invitation and on finance. The committee on programme submitted somewhat the following programme: Colonel George E. Waring, of New York city, to give us a paper on the subject of sanitation. Colonel Jared A. Smith to give us a paper on water supply. The secretary of the State Board of Health, Dr. Probst, to give us a paper on the effects on the public health of poor sanitary conditions, and Cady Staley, president of Case School of Applied Science, to give us a paper on the scientific disposal of garbage and sewerage. These gentlemen have all expressed a willingness to comply with our request.

The committee reported to the council at a meeting last week. The programme and work of the committee were approved and it is now in good shape, expecting that the society would approve their action.

On the question of place of meeting the council decided to make a negative report. We have an option on Y. M. C. A. Hall and Music Hall, but the council did not care to decide the matter.

This report of the council is open to the society. Of course, the council acts during the time that the society does not hold sessions. The question of finance comes up. The committee on finance (special committee) is raising funds in order, if possible, to make it cost the society nothing but should it cost something, of course the society will be responsible, and as we can spend only $25 in this way, aid of the society will be necessary. We could get Music Hall for a minimum charge of $40, $5 for the afternoon session.

(Moved, seconded and carried that the report of the council be received.)

The next question would be a question of where we shall have this meeting. I have outlined in a general way the character of the meeting, but we will call on the chairman of the sub-committee on programme to give us more definitely the plans and ideas of this special committee that has been working for the last three weeks to get you up a programme. I will call on Dr. Sherman, who is chairman of this committee.

Dr. Sherman—Knowing that the society would be wearied by any lengthy discussion of this subject, I would simply say that the fires of enthusiasm have been kept burning brightly. The discussion of this question has been such that we are impressed with the fact that this meeting is to be a very large one; is

to be taken out of the hands of the society and given over to the public. The meeting should be a mass meeting in which every interest in the city should be considered. We feel as stated in the address of Thucydides before the Athenians 2400 years ago, in which he said that "any citizen not interested in the public weal was a worthless character, and not simply an inoffensive nonenity." We believe that those words are just as strong to-day as they were 2400 years ago. There is no man, woman or child who is not deeply interested. The members of the Medical Society have done themselves great honor in taking the initiative steps. If we intend to interest the public we should bring before them men of national reputation; and we turn naturally to Colonel Waring, than whom no engineer stands higher.

In asking President Staley to discuss the subject of disposition of sewage we felt that we were bringing before you a man of authority, a man who had writtin upon the subject and who is qualified in the largest degree to discuss it in an interesting manner. We need not to speak of Colonel Smith because you all know his extensive information upon the subject of topography, the influence of currents of our lake and all those conditions which influence the purity of our water supply.

Some obstacles presented, which were overcome by requesting the municipal Board of Control to second our efforts in inducing these men to address us. I may also say that the Chamber of Commerce have signified that they will enter into the matter very heartily. I myself have discussed this matter with a number of representative citizens, and they are enthusiastically of the opinion that the meeting will be a grand success. I am also authorized to say that the press has indorsed the programme.

Dr. Campbell—It is a question of general interest. We can certainly get an audience that will fill Music Hall, and I make a motion that the Committee be instructed to secure MusicHall. (Seconded).

On a standing vote on securing Music Hall for the evening meeting the motion was lost.

It was the action of the society that the committee secure Y. M. C. A. Hall.

NEW BUSINESS.

Letter of resignation of N. Stone Scott as treasurer of the society was read and accepted. Secretary was instructed to cast the ballot for Dr. F. C. Taylor as treasurer.

Dr. Cook—The library is now housed in the Case Building. Pamphlets will be distributed here tonight, giving a list of journals, about 45, that we have subscribed for, and about 45 in exchange. There is a duplicate list of books belonging to the Cleveland Medical Library Association for exchange. The librarian instructs me to say this, that any one looking over this list who has a book that he would like to exchange for one on the list can do so. We have now $5200 at interest, with about $2000 uncollected, thus giving us in the neighborhood of $7000, which will be at interest.

REPORT OF CASES AND EXHIBITION OF SPECIMEN.

Dr. Brokaw—I have one here that may interest the society somewhat. Case and specimen of a fetus at seven months born with one arm. One arm is entirely missing and one leg is very badly bent up. Apparently due to maternal impressions. The parents were perfectly normal people. There were no cripples. The mother said she often had a sensation on the right side of one side being entirely absent. The sensation came on as if there was nothing there at all. In addition to that, being a seamstress, she sat with the foot under her, and the foot of the fetus is very much curved up.

Dr. Skeel—Would like to ask if the mother told him anything about her feeling the sensation before the child was born. The remark I wish to make is this: I would not like to have the idea go out that the theory of maternal impressions is entirely accepted. An abnormality of that sort must be due to lack of development or amputation. If lack of development, such an impression must have been made on the fetus at a

time when the arm was not at all developed, before the second week of pregnancy. It cannot be explained on any other than scientific and developmental ground.

Dr. Brokaw—The fact that the mother was in the habit of sitting with one foot under her was a probable cause, although many times worse apparent causes make no apparent impressions at all.

Dr. Wirt—I remember the case of a child that had double club foot, double club hand, imperfect action at hips, knees, shoulders and elbows; besides this, the club foot and hand made imperfect action in the wrist and ankle joints. The mother said she had been frightened when she was a month along by a discharge of firearms, and had queer sensations afterwards. I inquired of her very distinctly on this subject and she asserted firmly that this discharge of firearms occurred. I then inquired of other members of the family and neighbors and could never verify her statements at all. So that we have in this case simply the statement of the mother, and it has been my experience that you would often have to rely simply on the statement of just one person, the mother, and that generally after the birth of the child.

Dr. Campbell—Impressions from nervous influences produce certain deformities. A friend of mine and his wife and myself attended a lecture. We were shown into a seat, and in front of us sat a gentleman with a hare-lip. The gentleman in front turned around and looked up. The lady was greatly shocked at the appearance of the gentleman's face, and insisted she had marked her child. I attended the confinement, and found that her child had a hare-lip. Now, she did not wait until after the babe was born to declare that she had marked her child.

Dr. Skeel—"One swallow does not make a summer."

PROGRAMME.

Dr. H. W. Quirk read a paper on "Submucous Perineorrhaphy" (New Method).

DISCUSSION.

Dr. Humiston—It is very difficult to discuss this operation, having had no experience with it whatever, and as the Doctor's experience is limited, he will be able to give us a more satisfactory report in a year from now. I would criticise the operation in this respect, that it would have a very limited field, and where it is necessary to do a perineum operation at all, I should be much more inclined to make a more thorough operation than to adopt this method. I did for a long time the split-flap operation of Tait, and while that makes a very beautiful cosmetic result for a few weeks, if you examine your case in six months or a year from that time you will not be satisfied with the result. I rely entirely upon the operation given out by Emmett. If you have simply a laceration of the muscles of the first or second stage and not a transverse laceration of the levator ani, a very simple operation will suffice; but where you have a tranverse laceration of the levator ani with a central laceration of the perineum, it will be necessary to narrow the vagina, and for this condition the Emmett operation I feel is unsurpassed. This will give you a result of which you will be proud at once and for all time.

Dr. W. E. Lower read a report of a case and exhibited specimen of "Spontaneous Rupture of Bowel."

DISCUSSION.

Dr. Crile—Another interesting thing was that a man should live after receiving such an injury caused by so slight a traumatism, especially as this subject had been accustomed to lifting heavy weights all his life. He walked to the office and walked to his home and died in twenty-six hours. What is still more remarkable is that there were found no traces of previous disease, neither were there found any old adhesions.

Dr. Rosenwasser—We are accustomed to wonder what is the cause of this collapse; whether the collapse is caused by the rupture of the blood vessels or whether it is due to some special severance of nerve action. Where there has been a large amount of blood the collapse is very easily explained. Why did not this man have collapse?

Dr. Lower—There was a muddy-

colored fluid found, but there was no blood.

Dr. E. G. Carpenter read a paper on "Centre and Nerve Paths for the Chewing Movements in the Brain of Rabbits."

DISCUSSION.

Dr. Upson—I was much interested in the paper of Dr. Carpenter. This whole matter of motor areas is by no means a settled one. It was at one time thought that there were certain areas in the brain which were strictly motor, that is, in the brain cortex, and that these motor areas supplied motion to the different muscles and nothing else. Since that time a good many experiments have been made in various directions, and it has been found that these motor areas are probably not entirely motor, but that they are to some extent sensory. A look at the cortex of the brain will very readily show how this may be. There are several different layers of cells, sometimes as many as eight, in the cortex. You will see that these cells, especially of the motor area, are by no means of the same size and abundance. There are some much larger than others, and it is probable that in the motor areas motion is subserved by the larger cells and the smaller cells perform some other function and very likely that of sensation. It is very possible that the muscular sense is located not only in the motor areas but also in the large motor cells. Experiment in this field is very active at this time. Those higher movements, the movements which require associated action of muscles, is a field of research which is of special importance, not only with reference to speech, but chewing, etc.

Dr. Crile—I would like to say that a little while ago, while going over a dog's brain with a Faradic current, I came across movements of mastication, but did not follow it out. I recall very well the automatic movements. I have had opportunity to see experiments on the brain of the monkey and have seen automatic movements. I see very much of interest and instruction in this paper.

Dr. Carpenter—In regard to these motor cells of the brain, I would say that I did find some of these cells were much larger than others. A peculiar feature about the section was that they were seemingly grouped about the special region. I would say, further, that there is quite a difference in animals. Some are quite responsive and others are not, so that it requires different strength of current with different animals—From the Cleveland Medical Gazette.

BOOK REVIEWS.

Annual of the Universal Medical Science. By Charles E. Sajous, M. D. Published by The F. A. Davis Company, 1895.

This edition is the eighth issue of the Annual, and comes out in its usual form and style, so neatly gotten up by this well-known publishing company.

A number of changes have been made among the list of associate editors. Professor Wilson, of Philadelphia, undertakes the department of diseases of the lungs. He has presented a well-written article, but has left out a few important advances in the study of pulmonary tuberculosis, which have been published during the past year.

Professor Gray, of New York, contributes an exceptionally good paper on diseases of the brain, and Professor Obersteiner, of Vienna, reviews and discusses the literature of the year on diseases of the spinal cord.

Articles also appear under the direction of Professors Montgomery, of Philadelphia; Pilcher, of Brooklyn; Keyes, of New York, and Fenger, of Chicago. Another article meriting special mention is that of Professor Rubino, of Naples, upon the diseases of the stomach, liver and pancreas.

An article on general therapeutics and pharmaceutical chemistry is unusually rich this year. This article was prepared under the direction of the late Dr. Dujardin-Beaumetz.

On the whole, the Annual of this year is fully up to the standard of the years past, and comprises in the main accurate review of most of the medical literature.

Mentally Deficient Children and Treatment and Training. By G. E. Shuttleworth, B.A., M. D., London.

H. K. Lewis, 136 Gower street. Price, 4 shillings.

This little book contains about one hundred and forty pages, and is devoted especially to the care of mentally deficient children. The author states that he has had a quarter of a century's residence in two of the largest training institutions for imbeciles, and this work is a collection and molding into book form various papers published by him during the past years.

The work is somewhat illustrated by a number of cuts, some of which have been published before. The author goes into the subject of educational training, hygiene and exercise, together with the moral training, with results and conclusions.

BOOKS AND PAMPHLETS RECEIVED.

Creosote Carbonate and Guaiacol Carbonate. Presented to the medical profession with the compliments of Schering & Glatz, 55 Maiden Lane, New York.

This little pamphlet will prove a very useful aid in the study of these preparations, and has been compiled with considerable trouble and expense on the part of this enterprising firm. We recommend all our readers to send their address for a copy.

Medical Terminology: Its Etymology and Errors. By P. J. McCourt, M. D., New York. Reprinted from the Medical Record, July 27, 1895.

The Treatment of Anal Fissure, or Irritable Ulcer of the Rectum. By Lewis H. Adler, Jr., M. D.

The Operative Treatment of Fistula in Ano. By Lewis H. Adler, Jr., M. D. Reprinted from the International Medical Magazine for October, 1892.

A Short Study of Epidemic Catarrhal Fever (Influenza) as Found in Children. By W. C. Hollopeter, A. M., M. D. Reprinted from the transactions of the Philadelphia County Medical Society, 1894.

Treatment of Scarlet Fever. By W. C. Hollopeter, A. M., M. D.

Biographical Sketch of Dr. Samuel Edwin Milliken. Reprint from Physicians and Surgeons of America.

Herniotomy—Osteotomy. By Samuel E. Milliken, M. D., New York. Reprinted from the International Journal of Surgery.

The Osteophatic Fad. By A. J. Steele, M. D., St. Louis, Mo.

Imperforation of the Rectum. By George Benjamin Johnston, M. D., Richmond, Va. Second Vice President Southern Surgical and Gynacological Association, etc.

On Movable Kidney. By George Ben. Johnston, M. D., of Richmond, Va.

A Practical Low-Priced Device to Secure the Trendelenburg Posture. By William A. Edwards, M. D., San Diego, California. Reprinted from University Medical Magazine.

The Treatment of Laryngeal Tuberculosis, With a Report of Cases. By Robert Levy, M. D., Denver, Col.; Professor of Physiology and Laryngology in Gross Medical College, Laryngologist to Arapahoe County, St. Anthony's, and St. Luke's Hospitals, etc. Reprinted from the New York Medical Journal for July 20, 1895.

The introduction of Coca into this country is of comparatively recent date, yet so marked have been the results obtained through its use (especially in diseases of a nervous character) that it has, in a great measure, superseded other remedies more commonly known, such as iron, nux vomica, damiana, phosphorus and numerous other remedies, which have been held in high repute as nerve remedies.

In women subject to nervous disorders, when too frequently none of the alimentary tonics seem to afford relief, coca in the form of Vin Mariani may be prescribed with confidence.

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THE PREVENTION OF DISEASE.

For the past decade we have been progressing, in the medical sciences, along the line of the prevention of the causes of disease. Masterful essays have been written and deep microscopical research has been brought in play to ferret out the cause of sickness. The fact of a micro-organic origin to a large number of diseases has been displayed. Methods have been proposed and inaugurated looking towards the destruction of the all-pervading germ.

All this vast material, the result of months and months of labor, has developed a great deal of useful knowledge, but at the same time has also developed an enormous amount that is of no earthly value.

The question arises, at the present day, as to whether we are not carrying this germ craze altogether too far.

We are taught almost "ad nauseam" that we must not allow our children to intermingle in the public schools; that they must have books that are sterilized, individual drinking cups (why allow them to drink at all during school sessions?) and should not bite their slate pencils for fear of bacterial poisoning.

We also learn that it is almost as dangerous for us to inhale the dried dust of a consumptive's sick room as to be closeted with a mad dog, for both present the possibility of bacterial affection.

What are the lessons to learn from all this scientific research? Has such science so taken the place of common sense that we are to be rated as idiots for not accepting all these dogmas?

It strikes us that while we may profit by all this scientific work, yet we must not lose sight (as we are inclined to do) of the relation which the so-called causes of disease or the micro-organic world has to individual susceptibility, resistance and environment.

We have been inclined to strive after antisepsis for the destruction of germs rather than to increase the natural resistance of the human organism. In this way we have ceased to encourage out-of-door living, good hygienic exercise and proper food—the key-note to all methods of life, which looks, not so much to the destruction of the germ as to the upbuilding of a strong and healthy race, whose natural tendency will be towards the resistance of disease.

Due regard should be given to the subject of contagion, when such may be the means of preventing the spread of virulent disease. We are not all of us composed of absolutely healthy bodies—far from it—but the more depends on our strict observance of the laws which govern the natural interchange of chemical elements that go to make the human being well and strong.

The following amusing poem appeared recently in the Canadian Magazine, illustrative of the extent of this microbic fad:

Your microbe meets me everywhere;
No chink nor crevice, brain nor bone,
But he has seized, and revels there—
A king of undisputed throne.
Around my porridge bowl he skips;
My ham is honeycombed all through;
He whets his fangs and smacks his lips
When smelling at my Irish stew.

I heed not thee; some nobler things
Than steak or trout or sausage balls
Cool Science to the devil flings
And leaves us but the empty stalls
Where Peace and Plenty sold their doves
And white-robed Innocence lies slain
Where friendship's tears, nor boyhood loves,
Shall ever make us fools again!

We thought, ah well! what matter how
We thought or felt, in part or whole,
Since Right or Wrong or Conscience now,
Is but some microbe in the soul!
We thought that strain from viol or lute,
Were spirit notes of higher things.
Alas! 'twas but some gay galoot,
That kicked and hopped among the strings.

Oh, leave me, Science, let me sleep
And turn my face unto the wall;
I've nothing now to guard or keep,
You've left me bankrupt, taken all.

Electro-Therapeutics.

IN CHARGE OF

DR. S. H. MONELL, New York.

FARADIC ELECTRICITY IN LOCAL INFLAMMATIONS.

A paper upon this interesting phase of electro-therapeutics was read before the last meeting of the Texas State Medical Association, by Dr. O. L. Williams, of Dallas. Perhaps in no other class of cases would the ordinary physician feel less prompted to employ electricity.

No physician, however, who accepts the modern view of the pathology of circumscribed inflammatory processes, and who has informed himself as to the physiological effects of high tension, rapidly interrupted induction currents can fail to recognize the immense value of postive sedation when applied to a congested ovary, an incipient boil, a painful carbuncle, a swollen and inflamed joint. Very little has been written to bring this important action of sedative applications to external glandular hyperemia before the medical profession. Indeed, Dr. Williams claimed in his original paper to be the first to thus favor the use of faradic electricity in acute inflammation. About two years ago the editor of this department presented the claims of static electricity in cutaneous affections, and others have described the uses of Galvanism. It is certain that by judicious selection of the form of current, and the manner and dosage of the application, the electro-therapeutist may do much to relieve pain and hasten resolution in cases otherwise tedious and filled with suffering. Proper apparatus is, however, essential as well as the proper method of making the application. The practitioner whose knowledge of Faradism is confined to a pair of sponge handles and whose outfit consists of a "family battery" would do well to increase his skill before attacking a carbuncle. The following letter will be read with interest:

Dr. S. H. Morrell:

By request of yourself and many others I will in a short practical way undertake to outline my method of treating carbuncles and glandular troubles with faradic electricity. While the number of carbuncles treated was not large, the result was all that could be desired in every case, only six cases have been treated. A history of one case, embracing the method of treating it, will suffice for all:

Mrs. W., age 45 years, of nervous temperament and moderately vigorous, had been suffering from a carbuncle on the hip for a week, when I was called to see the case. The denuded carbuncular area measured three to four inches in diameter, and presented a dry desiccated surface. There was a temperature of one or two degrees, and the pain so severe as to require the use of opiates pretty freely.

She had with the ordinary domestic remedies, such as flax-seed poultices, been treating it locally. Her apology for not calling in professional aid

sooner was a dread of the knife, and only consented to summon the writer because of some one telling her I claimed to cure carbuncles with electricity. I at once begun the use of faradic electricity by applying an electrode well padded with absorbant cotton, and large enough to cover the carbuncular area and connected it with the P. P. A larger N. electrode, 4 by 8 inches, was applied under the buttocks. The negative cord was double the length of the one connected with the P. P. Whether, as stated in my paper read before the recent State Medical Association, a difference in the length of the cords removes the neutral point in the circuit farther from the inflamed area, thereby securing for the inflamed zone a flow of P. electricity, remains to be determined. Theoretically the claim is untenable and directly antagonistic to the polarity theory as taught by all exponents of faradic electricity. However, facts are stubborn things and when thrown in the balance against theory should have precedence. If my declarations be seemingly an innovation, it is not by any means an isolated instance in therapeutics. At all events the method in my hands has proved surprisingly successful, and a failure to so report, would do violence to my observations. The statement may subject me to criticism, but that applications made in the manner suggested have a more soothing and better effect I verily believe to be true. After the electrodes are in position the cords are connected with the primary or coarse wire coil of the ordinary Kidder Tip Battery(any other reliable battery would do as well) and a current turned on that should not be unpleasant to the patient. The electrodes should be repeatedly wet with a warm solution of salt, and the applications made one hour in every four. This is the minimum—longer seances will in my opinion give even more decided results.

In the case of Mrs. W., after the first 24 hours' treatment, no anodynes were required nor given. After the fourth day the dessicated area of the carbuncle was permeated with moist secretions from beneath, and with my rat tooth forceps I was enabled without pain, to remove the dead tissue, now detached and thrown off by the healthy granulations beneath. The applications were continued as before for three days longer, when the case was dismissed, only using for a few days a 5 per cent. solution of carbolized oil, which had been kept on the surface all along in the interval between treatments.

Let us for a moment stop to consider in a dispassionate way what special advantages has this over the ordinary surgical methods, and in the first place I claim it is less painful. In the second place, if applied in the incipient stage before there is a formation of pus, a certain per cent. of cases can be aborted, and if not aborted, certainly the inflammation precess can be very much circumscribed, which is a very material consideration. In the third place a cure can be consumated with far less constitutional disturbance. In the fourth place the treatment is far less formidable to the patient than the bistory or hyperdermic syringe. And in the fifth and last place the induration is dissipated very much sooner. But, asks the crtic, how can faradic electricity effect a cure?

I answer first, as suggested in my former paper, that faradic electricity, acting through the vaso-motor nerves, constricts the arterioles, limits dilitation, and by urging the blood forward in the blood channels, prevents stagnation, deoxidation and certain death to all that portion of the inflamed zone, deprived of the life sustaining, highly vitalizing blood.

Second. By its benign effect on the capillary circulation, whereby the blood is diverted from the inflamed zone to other channels whose integrity has not been compromised by the inflammatory process and proportionately lessening engorgement.

Third. By keeping open the blood channels transudation into the extra vascular spaces or tissues is limited, and as extra vascular pressure is a prominent factor by favoring obstruction of the circulation in the

capillaries by compression, it is a matter well worth considering.

Fourth. As pain is largely due to exudates, which compress the nerve filiments, whatever limits transudation will in the same degree prevent pain.

Fifth. By keeping open the blood channels the scavengers or systemic microbe destroyers are being constantly transported to the seat of inflammatory warfare, and get in their wholesome work, thus limiting infection.

Lastly, omitting much that might be said in favor of faradic electricity, in the class of cases under discussion, its mission does not stop with an arrest of the inflammatory process as does surgery, but without a parallel in therapeutics, by the same identical physiological methods, exercised to arrest the inflammation, it hastens resolution, promotes absorption of the inflammatory products and favors early restitution. The first proposition is no less true than the second.

I have not had an opportunity of treating one of these cases since providing myself with the high tension, fine wire faradic coil, but am constrained to believe it will be found more potential than the short, heavy coil used in the past. However, the short, heavy coil gives a current of larger volume and low tention and may prove the most desirable of the two. I will prepare for your next issue a paper on the treatent of glandular troubles, and in the one following, on appendicitis.

O. L. WILLIAMS, M. D.,
Dallas, Tex.

October 3, 1895.

Medicine.

IN CHARGE OF
DR. E. W. BING, Chester, Pa.

PREVENTIVE AND CURATIVE TREATMENT OF OTITIS OCCURRING IN TYPHOID FEVER.

Ear trouble is not a rare thing in the course of typhoid fever. The patient complains first of buzzing or humming noise, then of some loss of acuteness in hearing followed by more or less complete deafness. At the same time pain, generally severe and of pulsatory character, is experienced. It often occurs in the beginning of catarrhal otitis, which may remain as a simple inflammation, but which in numerous cases goes on to suppuration. Occurring in a patient more or less weakened by the fever, it may be of great importance, from its signatae. The common termination is by perforation of the membrane of the tympanium. The inflammation often extends to the mastoid cells and may result in chronic otowbrea and carries of the petrous portion of the temporal bone. To prevent these complications it is necessary to watch the ears of typhoid patients with the greatest care. At the least dulness of hearing or even complaint of noises in the ear, we should act. It is proper to assure ourselves, if the patient is taking quinine, that the symptoms are not due to the drug, and for this end, the administration of it should be temporarily suspended.

The treatment of otitis comes under two heads:

First, we try to arrest the inflammation and prevent suppuration; if not successful in that we must relieve the middle ear of pus, and prevent the reformation.

Purcutive treatment consists in strict antisepsis of the external ear and of the pharynx to avoid the introduction of pyogenic germs. For this end a wash of boric acid must be used in the external auditory canal after which the canal is carefully dried, then cotton, which has been soaked in a saturated mixture of boric acid and alcohol, and dried in the air, is introduced into the ear, and a layer of absorbent cotton placed outside and over the ear.

If pus has formed the indications are to evacuate it and thus avoid the complications which may follow. Early intervention has the advantage besides of presenting or relieving the severe pain.

The auditory canal is examined with the otoscope, and if the amount of pus is considerable the tympanic

membrane will appear infected and swollen, the membrane is then perforated with a stylet or trocar, and the pus allowed to escape. The operation is very painful, but the momentary pain is trifling when compared with the persistent and continued pain which the patient suffers if the case is left to nature.

After evacuation the middle ear is cleansed by injections of warm boric solution, continued till pus ceases to come away; the ear is then carefully dried and the antiseptic dressing discribed above, is employed. The lavage of the ear should be used several times daily.—Brill gen de Therap.

Rosenbach says that the number of chloratics has increased greatly during the last few years and considers that the cause is to be found in the corset as an article of dress. The compression excited by it on the abdominal and thoracic organs prevents full play of the respiratory powers and this reacts in the function of hematosis.—La France Med.

TREATMENT OF FURUNCULOSIS.

The nature of the soil of the locality is a prominent faction in the etiology of this affection. If, as a general thing, furuncles are single it is not rare to meet with cases where they occur in series. To this individual predisposition are added infections by propagation of the staphylococcus in the parts surrounding the boil, besides the local trouble due to pain and swellings, there may as a result occur digestive difficulties. Therefore, general treatment should be instituted as soon as possible.

1. Internal treatment:

Tar water as a drink. Cachets containing

Sulphur .....10 cgms.
Camphor .....2 cgms.

Three of these are given during the day.

2. External treatment, early touching or painting of the boil with tr. iodine. In opening, if necessary, and after removal of the contents or core, the cavity is to be filled with apacte of sulphur comphor and glycerine, and the same applied on linen over all the eruption. This treatment usually brings about a rapid improvement. The presence or absence of sugar in the urine should always be determined.—Bull. de Therap.

Antipyrine in subcutaneous injections as an anti neuralgic and lemostatic. An equeous solution of antipyrine is used, and as a rule only one hypodermic syringe full is used, rarely two are required. The point of injection is then "massaged." The injections are very painful for about a half minute.

Out of 130 cases of lumbago treated by this method, 122 were cured. Out of 18 cases of sciatica, 8 were cured all cases of migraine were cured. The pain, however, was so intense that few persons returned after the first injection. One case of trigeminal neuralgia, and two cases of profuse epistaxis were cured by the injection. In some cases it was necessary to inject on four consecutive days. As antipyrine attacks the metal of the syringe, it must be carefully cleaned immediately after use. —Bull. de Therap.

A new method of sealing nursing bottles after sterilizing their contents is described in the Courier Medical, as follows:

The bottles are filled with milk and the nipple fitted over the neck. A short test tube of proper size is placed over the nipple, in an inclined position; the bottles are then heated for half hour, and while being withdrawn from the sterilizer the test tube is pushed down on the nipple, thus sealing the bottle hermetically. It is then placed in a cool place, till required for use.

Chlorine water in the gastritis of drinkers. Zedeker treated a case as follows:

Chlorine water .....8 gram.
Decoction marshmallows. 165 gram.
Sugar .....8 gram.

Tablespoonful every two or three hours. The gastritis was cured, appetite returned, depression was removed, and the desire for drink banished.—Courier Medical.

TRANSLATIONS FROM

Foreign Exchanges

BY DRS. CHANDLER AND DAVIDOW.

1. Sehlen. To the Early Study of Lononhea. (Monatschr. f. pract. Dermati xviii, No. 12.)

2. Furst. Treatment of Gonorrhea After Janet's Method. (Deutsche Med. Wochenschr., 1894, No. 36.)

3. v. Mibelli. Treatment of Urethritis Blenorrhea. (Monatschr. f. pract. Dermat. xix, No. 6.)

1. The author advises, if possible, the early treatment of gonorrhea with a solution of nitrite of silver. Its concentration should be the stronger. the less the process has developed; the milder to be selected, the stronger the inflammation. In the first 3-4 days, injections of 1-4 to 1 procent, with a small syringe, are well born. In advanced cases the author washes the anterior part of the urether, by means of a catheter having a backflaw, with a solution of 0.1-1.0 per mille, heating to bodily temperature, using the above stated strength in a few days. If treatment is instituted in the first four days, one day's treatment shows a positive disappearance of the ginococci; a week's infection necessitates 3-6 days to obtain the same result, while a two weeks standing infection, twenty days and more may be required. This method confines the gonorrhea to the anterior part of the urether, and aborts complications. The treatment, however, should not be abandoned too early, for while the gonococci may not be found in the secretions, yet relapse may occur.

2. Furst made 33 experiments with Janet's abortive method (washing the urether with 0.05-0.1 procent solution of hypermanganate of potash), in early developed gonorrhea. In 15 cases it took from 8-34 days to establish recovery. Eight patients left the hospital from 7-18 days uncured; in 10 the method had to be abandoned as valueless. The method according to the author is painful and not without its complications. In the 33 cases he met with four diffuse infiltrations of the corpus caremosum urethrae two cases periurethral abscess one case of prostate abscess and numerous cystic catarrh. The author cannot advise the adoption of the method.

3. Likewise has Mibelli experimented on the abortive treatment, on a few recently developed gonorrheas without any good results. In the process of the highest acuteness, this method was not low at all. In subacute and chronic urethritis the author obtained satisfactory results.

To strengthen the pains during parturition. Dr. Kupffer, (St. Petersburg Med. Wochenschr., 1894.)

Dr. K. gives 12 drops of one per cent. solution of morphia mur. in aq. amagd. amar. He first allows the woman to tire, or when no progress is made and but a slight dilatation of the oss, he administers the drops. When the pains stop with the engagement of the head, he administers the same a second time. In the last moments of parturition, the author obtains assistance, with a teaspoonful of chloroform on a piece of cotton placed under the nose. After the birth of the placenta, he gives the secali comutum.

OPHTHALMIC DIPHTHERIA.

Nicati recommends the blowing in of:

R. Acid Borac.....50.0
Calomel 1.0
Loutin 1.0

A small quantity of this powder is blown in twice a day, conjunctiva dusted, then cotton and bandage.

Death rate in large cities of Europe in 1894 per 1000 inhabitants:

Bristol, 15.4; Frankford-on-Main, 16.5; Berlin, 17.2; London, 17.7; Leeds, 17.8; Brussels, 18.1; Hamburg, 18.2; Leipzig, 18.7; Zurich, 18.9; Stockholm, 19.4; Rome,19.6; Glasgow, 20.0; Paris, 20.2; Manchester, 20.4; Lyons, 20.9; Dresden, 20.5; Bordeaux, 21.3; Prag, 22.1; Odessa, 22.3; Wien, 22.8; Munchen, 23.7; Liverpool, 23.8; Budapest, 24.4; Warchaw, 25.0; Bukarest, 29.9; St. Petersburg, 31.4, and Moscow, 34.1.

TREATMENT OF CONDYTOMATOUS SYPHILIS WITH BLOOD SERUM, ETC.

A. A. WIEWOROWSKI.

Starting from the standpoint that protective agents always develop in the bodies of those suffering from syphilis, and that these agents prevent the further development of the virus, the author came upon the idea of seeking in the blood of people in the tertiary stages of the disease, substances which introduced into the system of a person freshly infected, would prevent all further development of the syphilitic virus.

In favor of this point of view are the non-infectious quality of the later syphilitic manifestations and the immunity of syphilitic patients to fresh infection. Since the oragnism of those having the gummous form of the disease contains but a small quantity of syphilitic poison, because of the increase of the antitoxic substances, the author chose cases with tertiary symptoms from which to draw his blood supply. Robust persons, between the ages of 25 and 40, who had no other general disease, were taken.

Altogether 16 blood lettings, from the median basilic vein were performed for this purpose, and blood taken from two puerperal women with tertiary syphilis in addition.

The amount of blood drawn never surpassed 25 cc., and the operation was absolutely harmless, and even seemed in some cases to have a favorable influence on the disappearance of the local symptoms.

The blood was collected in glass cylinders, which contained a 20 per cent. na. cl. solution (1 c c.: 200 c c. blood) in order to hasten coagulation.

The serum thus obtained was run through a Chamberland's filter and preserved in glass tubes, each of which contained 10 cc.

Altogether, five cases of syphilis with primary and secondary symptoms, were treated with 988 3-4 cc. of the serum. Absolutely no other general or local treatment was instituted. Every other day from 10 to 20 cc., usually 10 cc., of the serum was injected under the skin in the region of the scapula. The injections caused absolutely no pain and neither a general nor local reaction.

Under the influence of the injections, the general health of these patients (who were in the same wards and lived in the same circumstances as other syphilitic patients) increased visibly. Not only the subjective condition was improved, but in three patients, who were weighed, the body weight increased 6 1-2, 2 3-4 and 4 pounds in a fortnight.

Further, the treatment with serum had a favorable influence upon the disappearance of the syphilitic phenomena. The primary ulcers healed quickly under the simplest dressings, the indurations were absorbed, the roseola disappeared rapidly (in three cases after 3-5 injections).

Moist and hypertropic pustules were gone after 3-4 injections with the exception of one case, which was very stubborn and required fifteen. The iritis disappeared, but only rather slowly. The glands became smaller in every case.

The continuation of the injections after all the syphilitic systoms have vanished does not protect from a relapse, and the symptoms do not then yield to the action of the serum nearly as quickly as they did at first.

Remarks on the therapy of the ulcus molle by Prof. A. Neisser, of Breslau (Berlin, Klin. Woch., 9 Sept., '95.).

In an article upon the treatment of the ulcus molle in women, V. Herff has indicated the favorable results to be obtained by cauterization with pure carbolic acid. He has found the cleansing action of the acid excellent and has used it for years in his clinic.

A single, thorough cleansing out of the ulcer, both its bottom and undermined edges, with a stick wound with cotton and dipped in phenol will often suffice to destroy the virulence of the sore, and to cause a clean, rapidly healing surface.

Cauterization with carbolic acid is wholly painless, and being fluid is easier to apply to the affected parts.

If an overrunning of acid be avoided, no noxious action will be observed.

Nitrate of silver is always painful

and often causes an artificial induration of the ulcer, so that it becomes difficult to diagnose whether or not the erosion be of non-specific origin.

If our line of treatment be to give anti-syphilitic medicines only when secondary symptoms make their appearance, an artificial induration of the sore with lunar caustic is of no importance, but it would be decidedly injurious if in a given case an artificial induration should lead us to diagnose the primary stage of syphilis and to commence treatment with mercurials. In such a case one could never be certain whether or not syphilis were present, a state of things readily avoided through the use of carbolic acid as a caustic.

After application of phenol our author uses a one per cent. iodoform ointment or iodoform powder locally. Over this is put a salve containing nitrate of silver, two per cent., and balsam of Peru, 20 per cent., by which the odor of the iodoform is completely covered. The smell of iodoform is caused not so much by the dusting of the wound, as by the careless spilling of it on the clothing.

To rid the hands of the odor they must not only be washed in soap and water, but also cleansed in an alcohol solution of thymol. A solution of this substance in alcohol and ether is also recommended.

As substitutes for iodoform, europhen and thioform may be used, although they have by no means the almost specific action that iodoform exerts on the ulcus molle.

It is worthy of note from a pathological standpoint, that the ulcus molle may be present in syphilitics and give the point of departure for a tertiary syphilitic relapse in the form of a serpigenous ulcer. The author mentions four cases which he had met with in one month in men who had developed ulcers after a coitus 3-4 days previously. He says here "these ulcers, although cleaned at first, were not to be brought to the healing point.

"Many weeks passed with unsuccessful cauterization, with many substances, and continual powdering with iodoform, etc. Finally the sore took on more and more the appearance of a serpigenous syphilide, with healing on one side accompanied by increase of the undermining and destructive processes on the other side. Rapid recovery ensued on administration of potassium iodide."

A cure of such cases by use of mercurials might seem to indicate a reinfection, but mercury is active in all three stages of syphilis, and so it can be of no diagnostic value as to whether we have a tertiary ulcer or reinfection.

If in a case like this, the ulcer heals under the administration of potassium iodide we may be sure that we are dealing with a manifestation of tertiary syphilis.

BROMIDE OF LITHIUM IN MORBUS BRIGHTII.

BY DR. K. W. POLAKOFF,
"Wratsch" No. 29.

On the basis of 22 cases treated with this salt, the author recommends it highly as a safe and powerful diuretic, which reduces the amount of albumin and causes the edema to disappear. It is worthy of note that this action took place with the patient on a mixed diet, and was more energetic in acute than in chronic cases.

The diminution of the albuminuria began at the latest twelve days after the commencement of the treatment with li. br., and stopped after a time. To cause a continuation of the reduction of the amount of albumin, it was necessary to withdraw the drug for 2-3 days and then to recommence.

Bromide of lithium is well supported by the stomach; only in two cases was the author obliged to suspend its administration for a few days because of vomiting. In one case of acute nephritis with hematuria, the drug caused rapid disappearance of the blood from the urine. The author prescribes it as follows:

R. Lith Bromid 1.25-2.0
Sodii Biscarb.....4.6
Aq Dist.....240.
Ol. Menth Pip.....gtts ii
Sig.—3-4 tablespoonsful daily.

Next week: "The Curative Action of the Toxines on the Malignant Tumors," by Professor Campanini, of Rome. CHANDLER.

Miscellany.

PSEUDO-CHANCRE.

ABSTRACT BY WILLIAM S. GOTTHEIL, M. D.

Reinfection syphilitica does occur, but the recorded cases that are entirely trustworthy are very few indeed. Analysis shows that most of the alleged cases are open to grave doubt, and that some of them are manifestly errors of diagnosis.

The following lesions may simulate chancre:

a. Artificial indurations caused by irritants applied to simple lesions.

b. Nodular lymphangites, as occur in gonorrhea.

c. Scabies, where penile lesions are the rule.

d. Secondary indurations at the site of the initial lesion (Fournier's pseudo-chancre).

e. Secondary syphilitic papules or tubercles situated upon the genitals.

f. Ulcerative gummate of the genitals.

g. Epitheliomata of the genitals.

Two such cases have recently come under the author's observation. In the first one a non-specific sore was irritated with cauterisants until it exactly resembled a sclerosis, and was so diagnosticated by competent authorities. Nevertheless it healed up under local treatment alone; and until now, two years after date, no secondary symptoms have appeared.

The other case was one of gumma of the penis in a subject in the tertiary stage of syphilis. The lesion resembled an initial one very closely, and was at first regarded as such, but a close examination showed the presence of evidences of past specific disease, and this was confirmed by the history. The entire lesion melted away under the iodide of potassium.

Conclusions:

1. There is no characteristic sign, and no characteristic combination of signs, that enables us to diagnosticate a chancre from the lesion alone.

2. Only the advent of other syphilitic symptoms enables us to form an opinion as to the presence of systemic infection.

3. Almost all the alleged cases of syphilitic reinfection are of doubtful validity; and most of them are pseudo-chancres belonging to one or other of the above varieties.—New York Medical Journal, September 28, 1895.

THE TREATMENT OF TUBERCULOSIS.

On passing in review the multitude of remedies recommended from time to time against that scourge of mankind—pulmonary tuberculosis—one cannot but be struck by the paucity of our therapeutic resources. The demonstration of the microbial origin of phthisis effected a revolution in the treatment and led to the internal administration of antiseptics such as creosote, the use of which has been attended with some measure of success. Attempts have also been made to combat the disease by the subcutaneous employment of antiseptics, and among these aristol or dithymol has been employed, with effects sufficiently favorable to warrant a general trial. In a communication to the Paris Academy of Medicine several years ago Dr. Nadaud reported twenty-three cases of pulmonary tuberculosis, in seven of which a complete cure was produced by subcutaneous injections of a one per cent. solution of aristol. He regarded the drug as perfectly innocuous, and found that it was an active antiseptic and rapidly promoted the nutrition. In his opinion, however, it was useful in the first and second stages of the tuberculosis process, but unavailable when cavities had formed. These favorable results were confirmed by Dr. Da Silva, while Dr. Ochs, who also experimented with the remedy in six cases, wrote less encouragingly of its use. On the other hand, Dr. Beradinone, who tried aristol in twelve cases, reached the same conclusions regarding its value as Nadaud. He employed it, however, in larger quantities, injecting a 15 per cent. solution. According to his investigations, the remedy is especially efficient in the early stages of tuberculosis, reducing the temperature, diminishing the cough, expectoration and number of bacilli in the sputum,

and producing a rapid gain in weight. The last physician to publish his experience with aristol is Dr. S. S. Grusdieff (Therap. Wochenschr. Sept. 1, 1895), who treated thirty-three patients with subcutaneous injections of the drug in amounts of 0.01 to 0.45 gm. daily. Under its use the bacilli were diminished or disappeared from the sputum, which also became less abundant and tenacious; the cough and night sweats were greatly relieved, and in three cases the physical signs completely subsided, so that the patients appeared entirely cured. Aside from the pains caused by the injections, which can be readily tolerated, the remedy proved perfectly innocuous, and, in the author's opinion, there is reason to hope that in the case of older persons it will be a valuable addition to the materia medica of pulmonary tuberculosis.

GROWING PAINS.

Growing pains, defined as pains in the limbs caused by and during rapid growth, and sometimes so severe as to give rise to growing fever, have been diagnosed by the author less and less frequently as the years rolled by, until the vanishing point was reached. Cases which have been classed together under this name are the following:

Myalgia from Fatigue.—This is the commonest variety, usually about the knees and ankles after unusual exertion. They are probably due to autoinfection brought about by excessive production of effete materials in the blood and their inefficient elimination. Elevating the limbs and rubbing with the palm of the hand in a direction toward the heart, relieving venous stasis and facilitating a supply of healthy blood to the exhausted muscles, promptly relieves the pain.

Rheumatism.—This is second, if not first, in frequency. There is a slight pain in the joints, little or no swelling, and very mild fever, and hence the true cause is not recognized, but rheumatic endocarditis frequently develops in these cases.

Diseases of Joints and Bones of the Lower Extremities.—Cases of hip-joint disease and suppurative epiphysitis of the upper end of the fibula, diagnosed by the laity and allowed to go on untreated, are related under this heading.

Fevers, accompanied by pains in the limbs, in one instance proving to be inception of typhoid fever, constitute this class.

Adenitis.—Here, again, the mother still supposes that the lad of sixteen years suffered from "growing pains," but he was treated for gonorrhea and a sympathetic bubo.

The malady "growing pains," with its frequent concomitant growing fever, like its congener disorders of dentition, as a separate morbid entity exists principally as an article of faith. The complaint still maintains, however, a strong hold on the lay mind, and forms an extremely common lay diagnosis which is often the cause of much suffering, and even death, by leading to the neglect of curative measures at a time when they are most effective.—P. B. Benne, in Arch. Pediatrics.

Prescriptions.

Losophan in treatment of favus:

R. Losophan .....4 gram.
Ang. Aq. Rosae ...8 gram.
Lanoline. .....24 gram.

Rub twice a day, the affected portions of the scalp. The hair should be cut and crusts removed.

For local anesthesia:

Chloroform .....10 parts
Ether .....15 parts
Menthal .....1 part.

For spray, the anesthesia lucts for about five minutes.

Ichthyol in acute coryzo:

R. Ichthyol .....1 part.
Ether and alcohol, aa..1-100 parts.
Distilled water .....99 parts.

For nasal spray: One application sometimes cures.

Permanent cocaine solution.—Schleich.

Hydrochlorate cocaine 0.18
Hydrochlorate morphine 0.02
Chloride sodium 0.18
Carbolic water, 5 per cent....11 drops.
Distilled water .....90 gram.

The Times and Register.

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Original.

PYEMIA AND SEPTICEMIA IN THEIR SURGICAL ASPECTS.

BY J. M'FADDEN GASTON, M. D.,
Atlanta, Ga.

(Continued From Last Number.)

We are informed that pyemia usually follows wounds, suppurative inflammation of bone, or the puerperal state; and results in the formation of secondary abscesses in the viscera joints and connective tissue; and that it is sometimes associated with phlebitis or embolism." But this term is only applicable to those cases in which pus enters into the calculation. The morbid effects from other sources may be designated as toxemia, being the result of some toxic agent of a different kind, but should not be included in the category of pyemia. Thus it turns out that the cases of blood-poisoning may be numerous in which the element of purulent infection does not exist. It is true that cases of pyemia without any discoverable lesion have been reported, and it is hence inferred that the condition may occur as an idiopathic disorder. But in this, as in tetanus, the weight of evidence is in favor of a local origin, and it is in many instances difficult to detect the focus of suppuration. The development of pyemia cannot take place without the previous formation of pus, which becomes absorbed by the lymphatics.

The studies of Virchow concerning thrombosis and embolism showed that the changes in the veins which had been regarded as due to phlebitis were caused by the coagulation of the blood, and by subsequent degenerative changes in the thrombi thus formed; that the infraction and abscesses seen in the veins were due to emboli which had become detached from the softened thrombi; that as the white blood globules and pus globules were identical in appearance they could not be distinguished, and that it was improbable that pus globules found their way into the blood. On the other hand, Sedillot, Weber, Billroth and others have held that laudable fresh pus was capable of being absorbed and of producing a febrile movement (International Encyclopedia of Surgery). In support of the view that the poison might be one of the chemical products of putrification Panem's investigation led to the conclusion "that there is in putrifying fluids a specific chemical substance, soluble in water. This substance, if introduced into the blood, produces the peculiar symptoms which belong to what is usually called putrid or septic infection. This possesses such properties after being freed from all microscopic organisms."

It is no longer held that pus enters bodily into the circulation except in the event of ulceration of the venous walls, but the contact of pus with the lymphatics leads by a pathological process to septic absorption and hence to general contamination of the system. The experiments which have been resorted to for recognizing a distinction between the white cor-

puscles of the blood and pus corpuscles have not afforded definite results, nor has the hypothesis of a third blood corpuscle availed anything towards a solution of the problem connected with purulent infections.

The fact of a toxic influence being conveyed by pus through the lymphatics to the vascular system is recognized generally by pathologists, and while the link which connects cause and effect has not been clearly established, the clinical relation is sufficiently definite for all practical purposes. The collection of pus in the internal organs when confined by a pyogenic membrane may develop hectic fever, which disappears after the evacuation of the abscess; but the removal of a purulent focus of absorption does not always arrest pyemia.

That pyemia may occur independent of any ptomaine element is a fair inference from the history of cases in which purulent absorption seems to account satisfactorily for the train of disorders which are observed. In the cases of multiple abscess which are developed from a purulent focus, there is no reason to doubt that pus has entered the lymphatic system and, being arrested at certain points, leads to local collections of a purulent character. These abscesses conform in most respects to the characteristics of what is known as cold abscess, partaking of the nature of chronic abscesses; and are rarely accompanied with the accute inflammatory manifestations of phlegmonous abscesses.

When a purulent focus leads to the absorption of pus there must be a deficient formation of that protecting sac known as the pyogenic membrane, and, consequently, the purulent collection escapes into the collective tissue, and is taken up by the lymphatics and conveyed to the blood vessels or the capillaries. It then becomes absorbed, and, in some way not very well defined, develops pyemia commonly understood as blood-poisoning.

There may exist a local contamination from contact with septic matter, which spends its influence upon the part and forms a circumscribed abscess, without manifesting constitutional effects. Again there may occur absorption of pus through a slight prick or abrasion of the cuticle, attended with but little local irritation, which shall lead to general disturbances of a grave character. The development of lymphangeitis is marked by redness and tenderness along the tract of the lymphatics and with inflammation of the lymphatic glands. This is accompanied with decided febrile reaction and with prostration of the vital forces, terminating either by resolution of the inflammatory process or by suppuration at different points from arrest of the lymph in the swollen ganglions. It sometimes appears to lessen and mitigate the constitutional disturbance when these local collections of pus are discharged by free incision and drainage. But on other occasions no relief is afforded by their evacuation, and other points become the seat of suppuration with an aggravation of the symptoms of purulent absorption and infiltration.

These collections of pus are not confined in a distinct and circumscribed area by a pyogenic membrane, but permeate the cellular tissue and extend along the sheaths of the tendons, thus assuming the character of a diffused abscess. The toxemia may be limited to one side of the body entirely or may extend throughout the absorbents on both sides and thus become general, involving the whole system. The exhaustion of the vital forces at this stage is usually accompanied with great emaciation, and the nutritive process becomes so much impaired that nourishment avails but little. In a paper submitted for consideration of the American Surgical Association in 1893 the full report of a most protracted case of pyemia was given in detail. This patient presented all the various features of the different stages of this affection, and I would refer those who are interested in the history of this disorder to the transactions of that year for information in regard to the progressive destructive work of this disease to its fatal termination after the lapse of nearly

five months, attended with extreme emaciation.

As an offset to this fatal result I may advert to two fortunate cases of great gravity in members of the medical profession—one being in the person of an interne in the Providence Infirmary at Atlanta, and the other being that of a prominent practitioner of Anniston, Ala.

The former occurred from slight injuries to the hand in making a post-mortem examination, under my observation, and came under my care, beginning with points of local irritation, extending to the entire arm, and becoming, in a few days, a constitutional disorder. It ran through a most violent course, attended with suppuration at various points in the hand and arm, and leaving the subject extremely prostrated and emaciated, with a long, protracted convalescence. There was finally remaining only the stiffening of two fingers of the affected hand.

The latter case, above mentioned was seen in consultation with colleagues, and was in consequence of a scratch by a piece of necrosed bone, in performing a surgical operation. Incisions had already been made to relieve tension at several points about the hand and wrist, and the patient was kept under the influence of morphine. It may be briefly stated that with the treatment, which will be outlined, he eventually recovered entirely.

The indications at the outset, when there is local irritation at the point of injury, is to incise the affected part, and cauterize with carbolic acid, applying to the adjacent area an ointment containing equal parts of the following:

R.—Ung. Hydarg.
Ung. Iod. Comp.
Ung. Camph.
Ung. Bellad.

A poultice of flaxseed meal may cover the inflamed structure, and be renewed frequently to keep up heat and moisture.

If there should follow much swelling and great tension, incisions should be made freely to relieve the constriction, and give an outlet to the sero-sanguinolent accumulations. This course is more especially indicated when the hand is involved, and when the inflammation extends up the arm, invading the axillary glands, the ointment and poultice should be carried up to the shoulder, so as to cover the entire arm.

If the case progresses favorably, there may be no accumulation of pus above the elbow, but if abscesses form, they should be promptly evacuated, and washed out with antiseptic solutions.

It may be laid down as a general rule for our guidance, that any original or secondary purulent focus should be freed from septic matter, in whatever form it may exist. If not accessible by curetting or swabbing out, then we may avail ourselves of syringing with those antiseptic solutions which are least likely to do harm by absorption, such as peroxide of hydrogen, permanganate of potash and Lugol's compound solution of iodine. In the event that blood clot has remained in the womb after labor or abortion, and is undergoing decomposition, there is, in my observation, a decided preference for a strong solution of chloride sodium, as it conduces best to dissolving the blood clot. This holds good in the case of sanguineous deposits in the abdominal cavity, in hematoma wherever found, and in the accumulation of menstrual fluid, though there may be no coagula to dissolve, and whenever a septic process may result from the collection of blood in the tissues. The solutions of carbolic acid and corrosive sublimate should not be used, as by absorption they may prove detrimental.

The medicinal treatment must be varied, according to the condition of the general system at the different stages of infection, and at the outset calomel and Dover's powders in moderate doses, followed by Epsom salts, with senna tea, are usually indicated. After free purgation, it is found that quinine and phenacetine have a most salutary effect, and if there is great suffering, with pain and restlessness, morphine and atropia may be employed hypodermically to secure rest.

To modify acute inflammation before the suppurative stage, the combination of fluid extract of jaborandi

with salicylate of soda, has been attended with most salutary effects, and should be urged to the extent of tolerance. It is to be expected that free diaphoresis and profuse salivation will eliminate to a large extent the poisonous contamination of the vascular system.

I had occasion to observe some years ago a most happy and complete transformation in a case of puerperal septicemia from the subcutaneous injection of one-tenth grain of pilocarpine which produced profuse sweating and relieved the patient of all septic troubles.

After the development of abscesses the chief reliance is upon tonics and depuratives; my experience with the following combination has been quite satisfactory:

R.—Tinc. Cinchonæ Comp .....2 oz
Tinc. Nucis Vomicæ .....1 dr
Kali Chloratis .....1 dr
Aquæ, q. s.....6 oz
M.—Sig. Tablespoonful every three hours.

When the toxemia progresses in connection with the purulent discharge it has appeared to be advantageous to introduce into the system gradually an alterative and tonic, such as the following:

R.—Donovan's Solution .....4 dr
Tinc. Gentian .....3½ oz
M.—Sig. Teaspoonful every four hours.

To arrest disintegration of structures, various preparations of iron, such as the albuminate of iron, iodide of iron and the muriated tiacture, with cod liver oil, lager beer, malt, etc., have been used with benefit in the advanced stages. Everything which can aid the recuperative process in indicated.

The proper sphere of real antiseptic surgery comes into play with pyemia and septicemia, as these are pre-eminently septic developments which require the use of measures to counteract the contamination of the organism. Not only in the local but in the general manifestions is sepsis to be combated, and hence it becomes requisite to correct the secretions and stay the disease of the organs by internal antiseptic remedies. Some have regarded alcoholic treatment as indicated from the outset of the disorder, and that nourishment of a character to prevent the waste of tissues should be combined with the alcoholic stimulant. The mixture of milk and whisky or brandy, in form of milk-punch, is found to meet the requirements satisfactorily as a routine diet. But it is desirable to supplement this with beef soup, cornmeal gruel, malt and fresh vegetables, such as Irish potatoes, okra and tomatoes, suited to the state of the digestive organs and to the power of assimilation. It is a matter of pre-eminent importance to sustain the physical organization throughout the septic process.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

The fifth annual meeting of The American Electro-Therapeutic Association was held in Toronto, Canada, on Tuesday, Wednesday and Thursday, September 3, 4 and 5, 1895. The sessions were well attended. The first day's session began at 10 o'clock on Tuesday morning, the president, Dr. A. Lapthorn Smith, of Montreal, introducing Dr. James Thorburn, of Toronto, who welcomed the visiting members on behalf of the resident profession. Dr. Charles R. Dickson in an address also welcomed the members.

The president then read his address on "Electro-Therapeutics in General Practice." This was followed by the reading of the reports of the Committees on Scientific Questions. Then followed the reading of the papers in their regular order, as per accompanying list.

In the evening the members were invited by the president of the Toronto Street Railway to a ride around the city in his private car. Mr. James Gunn, the superintendent, showed the members the power house of the company.

The second day's programme was carried out as per schedule. The executive session was held in the afternoon, the election resulting in the selection of the following officers for the year 1895-1896, viz.: President, Dr. Robert Newman, of New York city; vice presidents, Dr. Holford Walker, of Toronto, Canada; Dr. D.

B. D. Beaver, of Reading, Pa.; treasurer, Dr. R. J. Nunn, of Savannah, Ga.; secretary, Dr. Emil Heuel, of New York city; Executive Council, Dr. W. J. Morton, of New York city; Dr. G. Betton Massey, of Philadelphia, Pa.; Dr. W. J. Herdman, of Ann Arbor, Mich.; Dr. Emil Heuel, of New York city; Dr. Wendell C. Phillips, of New York city.

In the evening the resident profession, who had taken a lively interest in the proceedings of the Association, tendered to the members a reception at the Toronto Athletic Club. The chairman of the Committee of Arrangements, Dr. Charles R. Dickson, had arranged a very fine concert, which was followed by a collation.

The third day was devoted to the transaction of unfinished business. To the labors and influence of Dr. C. R. Dickson the members enjoyed a very pleasant afternoon at the Toronto Exposition as the guests of the president of the Exposition, Mr. John J. Wittrow.

In the evening the members were the guests at dinner of the Board of Directors of the Exposition. This was followed by a visit to the Fall of Lucknow and the Pyrotechnic Exhibition.

The president has appointed the following committees for the year 1895-1896, viz.:

Committee on Induction Coils and Alternators—Dr. A. H. Goelet, chairman; Dr. G. Betton Massey, Mr. A. E. Kennelly. Committee on Meters—Dr. M. A. Cleaves, chairman; Dr. O. B. Douglass, Mr. W. J. Jenks. Committee on Static Machines and Condensers—Dr. W. J. Morton, chairman; Dr. W. J. Herdman, Dr. J. H. Kellog. Committee on Constant Generators and Controllers—Dr. W. J. Herdman, chairman; Dr. Robert Newman, Mr. R. G. Brown. Committee on Electrodes—Dr. C. R. Dickson, chairman; Dr. Lucy Hall-Brown, Dr. E. C. Riggs. Committee on Electric Light Apparatus for Diagnosis and Therapy—Dr. J. H. Kellog, chairman; Dr. E. C. Riggs, Mr. J. J. Carty.

It was decided to hold the next, the sixth annual meeting of this Association, in Boston, Mass., in the latter part of September, 1896.

A PRACTICAL STUDY OF THE BLOOD AND THE CIRCULATION, WITH A HISTORICAL REVIEW OF THE SUBJECT AND ITS BRIEF CONSIDERATION FROM THE STANDPOINT OF ITS CHEMICAL COMPOSITION, ANATOMICAL STRUCTURE, AND PHYSIOLOGY; INCLUDING CLINICAL STUDIES, AND EXPERIMENTAL RESEARCH ON THE LOWER ANIMAL.

BY THOMAS H. MANLEY, M. D.,
NEW YORK.

Continued from last number.

PART VII.

THE CIRCULATION OF THE CAPILLARIES.

The ultimate destination of the oxygenated blood is the capillary system. After the blood is discharged into these vessels this fluid commences to set in motion those vital morphological and chemical changes concerned in the maintenance of nutrition and life; new, fresh regenerating elements are distributed, effete, residual, lethal elements are taken up from among the connective tissues; structures are supplied, the organs and glands are provided with that pabulum wherewith they are enabled to fulfill their functions. It may be said that to the capillaries are severely restricted all those mutations and finer physiological changes in which the blood is concerned. The blood has been carried to them, on outside, by one system of vessels, and another is ready to receive their contents after its many and complex functions have been performed. We may compare the capillary system with a vast laboratory, open to receive the richly charged vehicles of supplies—the corpuscles. By a complex and intricate machinery and by the utilization of chemistry, materials are quickly transformed, the necessary elements retained and the residual cast aside, as a by-product. This comparison, as applied to the capillaries, is somewhat an exaggerated one; still it may

serve as a rough analogy. The arterial blood reaches the capillaries unchanged from the heart, and the elastic, bright crimson corpuscles are shot into them with the speed of a rocket. The living blood enters them with a mighty rush; but the archery suddenly breaks up and the vast host of corpuscles are sent into a thousand or more different directions. The impetuosity of the circulation has met a check, and now, happily with the aid of modern inventions, and a knowledge of those influences which affect the circulation, we may in many animals observe the movements of the hematic elements over the entire ultimate cycle. The capilliarized corpuscles, so to speak, enter the venous-current, changed in form and color, with a halting, languid movement. Formerly physiologists held that the principal blood changes in the transit through the capillary consisted in nothing more than a loss of oxygen and increase in carbonic acid gas; but now it is an established fact that this is only one of the many changes in which every element of the blood participates. Anatomists tell us that in certain situations, especially in cavernous tissues and in the spleen, the arterioles are directly continuous with the venous radicles, without the intervention of typical capillary structures; and, that the capillaries vary in size in different organs and structures. In area the capillaries taken together on cross-section amount to 800 times that of the aorta at its origin. With this vast capacity it is easy to understand that though the general steady movement through them in health is moderately rapid, yet, in order for the whole volume of the circulation to move through them the period for interchange is more than momentary, and sufficient time elapses for many vital and chemical changes. Notwithstanding that by injection we may force fluids directly from the arteries into the veins, the existence of capillary system has been called in question. But this view has not been proven by such demonstrations as to carry conviction; nevertheless, as we will see later, there are very good reasons for believing that in the peripheral circulation, at least, something more than these protoplasmic tubes are concerned in the final distribution of the blood, as there are many histological structures, the seat of physiological activity, quite isolated from them. On this subject there must for the present remain a large degree of conjecture, for in no other manner can the question be settled than by a direct study of the living, moving vessel; something quite impossible in all the organs. Dollinger believed that the arteries in their ultimate endings had no parietes, and that the blood moves, destitute of such, through a peculiarly organized substance; the veins and lynophatics originating in this as the arteries terminate it.

According to Hilbrand's theory, the whole blood is converted into organic matter or secreted fluids; that a proportional quantity of blood is secreted or thrown off by the different organs. Both of these authors assert that there is no evidence derived from either injections or magnifying power of the microscope to clearly establish a direct connection between the veins and arteries.

Haller and other distinguished authorities of his time attempted to prove that the minute terminal of an artery ended in five different ways—first, directly into the veins; second, into excreting ducts; third, in exhalants, in lymphatics and in colorless arteries. This doctrine in a modified form was maintained and taught by Boerhaave, Vieussens, Ferrein, Sommering, Chaussier and the majority of anatomists in later times. It may be added that these opinions rested on microscopical observations, injections, the changes occurring in white and transparent vessels, in times of inflammation.

Prochaska, Mascagni, Richerand and several others denied the existence of these vessels. The variety and complexity of vital and chemical actions certainly seem to demand a more extensive circulation than the generally acknowledged channels of supply. That the arteries are continuous with the veins is as self-evident as the circulation itself in the

main is no doubt an unassailable position; but that alterations, metamorphoses and vitiation of the corpuscular elements are entirely dependent on conditions promoted by the capillaries is, without doubt, erroneous.

By the aid of the microscope there are certainly things which we are enabled to determine with a considerable degree of certainty; but the use of the lens has its limitations, and there are very many of the most complex problems connected with the capillary circulation, in the solution of which it fails to aid us.

After the blood is discharged into the capillaries vital operations commence, active osmosis and exosmosis begin; large quantities of fluid escape from the plasma into the adjacent tissues; the endothelial and epithelial elements are renewed; the wasted, worn-out elements resorbed. The blood as it moves along within the capillary net washes the surface of the secreting follicles; but into the basis substance of their epithelial lining, through their stomata, or into the cullular interspace, not a single corpuscle will enter. We see the lymph paths, with the dimly defined nucleated, endothelial walls, passing under, around or between the capillary and its moving contents; the medullated nerve-sheath and its inclosed axis-cylinder lying alongside or across the course of a capillary, but none of the histological elements are directly fed by the corpuscles. How, then, is tissue metabolism, regeneration, growth and nutrition maintained? Undoubtedly, nay, almost indisputably, by a collateral circulation, such as is not yet described, because it has never been seen. It has eluded detection, because of its transparent elements, and for the present must be inferred, rather than demonstrated. To assume then that there is only one general circulation, that the capillary walls alone are endowed with such properties as execute the necessary changes in nutritution, is undoubtedly erroneous. They occupy physiologically an intermediate position only, between the artery and veins; confine the corpuscular elements of the blood; lead them to those territories needful of their functions; give off and take up; to be carried away for elimination or revitalization, nutritive or residual elements.

A NEW MEAT NUTRIENT.

I find Somatose, the new meat nutrient, a great assistant in the treatment of tuberculous and other wasting diseases.

It is a concentrated food, containing nearly 80 per cent. of albumoses. It differs from all other beef extracts in this essential point: it contains nourishment for wasting tissues, while the others are not foods, but stimulants. Somatose repairs waste of tissues; is always acceptable to the stomach, easily digested and immediately assimilated; increases the appetite; can be partaken of while undergoing active or athletic exercises; and this brings me to say that it is the best nutriment for bicycle riders and other athletes.

Put up in a most acceptable and portable form—somatose biscuits (by American Biscuit and Manufacturing Company, of New York)—it is not only a palatable food, but the most easily assimilated preparation ever produced, these biscuits containing 10 per cent. of somatose. Century riders will find it a boon, and I hope to see it supersede all stimulants like kola, etc. These simply allow one to draw on his reserve force and must be followed by depression to a certain extent, and when indulged in often are highly injurious. In somatose biscuits we have a food that sustains better than stimulants, and there can be no depression following it. It builds up tissue rapidly, and is the only proper food for persons needing something in a concentrated form to sustain them while undergoing excessive fatigue or severe exercise.

I will add that somatose biscuits are pleasing to the taste, which increases their value, the stomach accepting them most eagerly.

C. H. BERRY, M. D.,
No. 96 State st., Chicago, Ill.

The Times and Register.

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PHILADELPHIA, NOVEMBER 2, 1895.

"ON ELECTRIC REPRODUCTION OF FORMS."

Dr. B. W. Richardson, of England, gives the following as a result of original research in the last number of the Asclepiad:

Whilst watching the action of electric excitation on portions of nervous and muscular particles in very fine division, an observation turned up that was new in its character, and seemed not merely curious but important. I have put it under a distinct head and title, with the hope of deriving fresh light from it in the future.

During the simple experiments of placing perfectly dried nervous and muscular particles in the Newtonian box, as I may call it, I thought it would be well to compare the two material substances of fine nerve and muscle with other animal or vegetable substances, equally well desiccated, and placed under the same condition, for electrical excitation. I placed carbon, sulphur, magnetic iron powder, flour and starch under excitation, with results that were instructive as well as novel. But what interested me most was the complete reproduction of form by the process adopted when animal substances were employed—bone dust par excellence.

Effect on Dried Bone Dust.—A few grains of dried bone dust were placed on the floor of the box, and the covering, glass, having been placed in position over the dust, was subjected on its upper surface to friction. I expected, as actually occurred, that the fine dry particles would begin to move from the friction made on the glass; but I could not expect what really happened, namely, that portions of the dust, rising invisibly, adhered firmly to the under surface of the glass plate in the exact form of the structure that rested on the floor of the box.

The fact observed of the original form from the floor of the box was varied in the most different ways. The substance was laid out in the form of a cross. A portion of it rose, under the excitation, half an inch, and adhered to the under surface of the glass plate, taking the precise form of the cross below, even to irregularities of structure, so that the glass plate could be taken out impressed with the figure in an accurate degree in loose bone dust.

The figure on the floor of the box was changed. It was laid out in the shape of an animal, in the shape of a crown, in the form of letters of many varieties. It always rose to the under surface of the glass plate in the shape in which it had originally been formed.

A more curious experiment was the following: Figures were cut out from a portion of paper, so that the paper looked like a playing card of

diamonds, except that instead of the diamonds being painted in the ordinary manner, they were made as diamond-shaped openings. The cut paper was laid on the floor of the box and the openings were evenly filled with bone dust. The paper was then placed upon the floor of the box and stenciled with the dry powder. The glass was made to cover the whole and was warmly excited, on which all the part of the bone powder rose and adhered to the under surface of the glass, so that when the glass was lifted up the appearance of diamond shapes of dust remained on the glass. Twelve hours later the figures were still distinctly and rather firmly adherent.

Effect on Silica.—In another set of experiments the dried bone dust was replaced by silica, reduced to very fine powder and thoroughly dried. The figures drawn on the under surface of the glass plate were, if anything, more definitely copied out than with the bone dust—that is to say, the angles at the corners of squares were more refined, and the lines were sharper in curves, as is seen in the figures of leaves and the outlines of plants.

Effect with Albumen and Bone Dust.—Upon a part of the under surface of the glass plate a disc of albumen derived from white of egg was lightly painted. On the floor of the box a thin layer of finely-powdered bone dust was laid in a half-moon shape. The upper surface of the glass was exposed to sharp friction, and there soon rose to the under surface of the glass an excellent model of the bone powder, with finely distributed thin concentric layers of the bone substance round the central figure. The central figure itself was a perfect representation of the layer beneath,and for half an inch around it there was a clear round space which formed a very distinct ring, in which there was some fine deposit. There was formed around it a large halo of a fine shade, cloudlike, which took a concentric form a good inch in diameter on the glass.

Effect on Albuminoid Membrane.—A fresh egg was broken and a portion of the lining membrane of the shell the size of a half crown was spread out on the under surface of the glass plate. The mebrane was then coated with a thin layer of the albuminous white of the egg. The plate so charged was placed in its usual position in the box, and beneath the albuminoid membrane there was laid on the floor of the box a thin layer, of the same circumference, of fine bone dust. Under excitation of the upper surface of the glass a portion of the dust rose and adhered to the membrane, and around the membrane there spread out on the glass a fine cloudlike halo of the dust, through which ran series of delicate lines in a horizontal or faintly curved direction. After the bone dust cloud was complete the glass plate was removed and placed in the warm oven at 105 degrees Fahr., where it remained twenty-four hours. On being removed, the portion of membrane covered with the dust was quite dry and looked and felt exactly like eggshell, lifting easily from the plate.

Effect of Bone Dust on Widespread Albuminoid.—A glass plate fitting the box was covered with a thin layer of albumen. A portion of bone dust was laid in the centre of the floor of the box. The upper surface of the glass was subjected to friction, on which a well-marked impression of the surface of bone dust beneath was portrayed in a strong layer, while, as in previous cases, a halo of the dust was distributed over the glass in a large oval form. The glass on being removed was placed in the warm oven at 105 degrees Fahr., and remained also twenty-four hours. Upon removal a fine layer adherent to the albumen was spread out and fixed. There was in this layer diffused around the central prominence this peculiarity; there was a ring of a most perfect kind immediately surrounding the central layer and extending nearly half an inch around it. This ring was all but transparent, but was of the most definite character. It extended about half an inch from the central object, and from it was diffused a delicate cloud, thicker than itself and much larger, oval in shape and covering a surface quite three inches from the centre, the lines

radiating from the near or lighter ring. It was a very pretty object, interspersed at points with slight depressions, like faint marks made with the end of a probe.

Effect on Phosphate of Lime.—The under surface of a glass plate fitting the box was coated with a thin layer of fluid gelatine, perfectly transparent. On the floor of the box in the centre was laid a thin layer of phosphate of lime the size of a crown piece, but made irregular at the edges, intentionally, with one or two deep clefts. The glass was placed in its usual position with the gelatinous surface beneath; the upper surface of the glass was then subjected, in the usual way, to brisk friction, on which the phosphate of lime rose in the centre in considerable part and formed on the glass a precise image of itself, so that on comparison one image could easily be mistaken for the other. The glass was taken out very gently, when the following appeared: In the centre was the fac-simile of the lime layer, one inch and a quarter long, and at one part an inch wide, but with all the irregularities that had been marked on the original lime deposited. Around this centre, the margins of which were a little intensified, there was another finely marked layer, the fourth of an inch broad, completely surrounding the central mass, but not following it in outline; being, in fact, very sharp at its edge, though a great deal lighter in tone, and laid down in very distinct and fine encircling layers. From the external outline there ran other figures of the lime, extending lengthwise in one case one and a half inches, in the opposite direction one inch, in a lateral direction about one-quarter inch. The long parts gave a kind of external bat's-wing form to the centre, the layers seemingly concentric. The mass in the centre was very firm and bonelike in construction, but did not seem concentric like the final parts, the electric fluid not appearing to disseminate it equally, and leaving in it two or three oval-shaped thinnesses, which admitted light much more freely than its surrounding parts, except at the circumference.

Influence of Water.—The same kind of influence of water was observed in these experiments as in previous ones. If the under surface of the glass plate were moist there were invariably figures and outlines of the substance, with diffusion over a wide surface, with occasional condensations and points. It was also observed more than once that when a figure formed from dried material had been rubbed off the glass, so that the glass presented no surface of any figure upon it and was everywhere equally transparent as it seemed, the curious change took place which has been before observed, and ably demonstrated by Mr. Crofts; that is to say, when the glass was exposed to water vapor in the form of a light steam jet, the figure that had been previously marked upon the glass reappeared when the surface was made moist by the water vapor, but passed away as the water evaporated.

The above is presented as nothing more than a mere piece of original nature writing, which must not be left to rest at this stage of inquiry.

TRANSLATIONS FROM

Foreign Exchanges

BY DRS CHANDLER AND DAVIDOW.

POTASSIUM BICHROMATE AS A GASTRIC REMEDY.

Dr. T. R. Frazer obtained good results in 18 cases of gastric dyspepsia minus symptoms of ulcer, and 10 cases with symptoms of ulcer with Valpian's recommended treatment in gastric affections with potassium bichromate. In all the 28 cases, aside from purgatives, no other drug was administered, that the action could be carefully watched. Doses of five milligrammes to one centigramme, part in solution and part in pills, was given on empty stomach three times a day. To correct the taste in the larger doses it was combined with syrup of tolu or aromatics.

In simple dyspepsia, even small doses had a good effect. Within a short time it relieved the pain, nau-

sea, sensation of pressure and would stop vomiting.

In dyspepsia due to anemia or obstipation the drug has no effect. In a few cases of acute ulcer of the stomach with hemotomesis no result was obtained. In conclusion it is to be noticed that the drug has a strong germicide quality, which is probably one of the causes of the effect in dyspepsia.—Wiener Med. Blatter, 1894, No. 22-24.

PYOBACTERUM FISHERI.

With this name Dr. Kuttner christens a new pus developer, which he describes minutely in the Zeitschr. fur Hygiene, Vol. xix, No. 22. The organism shows similarity with the bacterium coli comune; it, however, distinguishes itself by certain characteristics. It is not as big nor as plump, grows slower, builds colonies of pure white and is more active in its movements. It coagulates milk slowly and in fine films, is a milder fermentor to sugar solution and does not produce alkalinity, but is rather slightly acid. It is distinct from bacillus Gaestner, pyogenus fetidus, bacillus endocarditis griseus and bacillus meningitis purulenta. A special characteristic being its wealth-producing culture of liquids, namely, indol and nitric acid—a peculiarity of which until now, excepting the vibrios, was observed in a small variety of organisms. Experiments on animals show the pyobacterum to be purely pus developer; in the mouse, guinea pig, rabbit and pigeons proving to be pathogenic. The introduction into serious cavities and the circulation killed the animals of septicemia in a short time. By subcutaneous or intromuscular embodying it leads to suppuration, forming abscesses on the 7-9 day, resembling croupous or diphtheritic process. In large doses the animals succumbed before abscess formation; with small doses the course is slow, formation of abscess and usually ends in death.

No. 38 Vratch appears with a wide black border in mourning after the late Professor Pasteur.

The Russian millionaire, A. G. Kusmetzow, in his will, remembered his physicion, Dr. P. P. Abrodinski, with 10,000 roubles.

In acne of the face, at the St. Louis Hospital, in Paris, the following ointment is used:

R. Sulf. sublim..... 7.0
B. naphtol .....
Ungt. styrac .....aa 2.0
Axung. porc.....50.0

M. f. ungt. D. S. Apply for six nights in succession, rubbing in well. After this time the acne should be mostly healed; otherwise, after some pause a few more applications are to be given.

In the suburbs of Odessa, young Dr. Nicolas Ilitch Kirakoff shot himself, five minutes after receiving the news that the patient on whom he operated for strangulated hernia died. Dr. Marragin, who assisted him in the operation, in a letter to the "Iusno-Russkoie Medecinskoie Obossenii" states, that no mistake was made in the technique of the operation.

On the 14th of September, the corner-stone was laid for the Pirogoff Anatoma-Chirurgical Musea to commemorate the illustrious Russian surgeon, Dr. N. N. Pirogoff.

Mrs. E. A. Masinoi-Puschkinoi donated 60,000 rubles, the Imperial treasury 30,000 rubles, and the ground of 7000 square feet was presented by the City Council. The Building Committee is under the chairmanship of Prof. Ratimoff. It will be a model institution, where the medical societies will hold their meetings and store their libraries.

On September 24, a public jubilee was held in honor of the thirty years work of the venerable and much respected opththalmologist, Professor Leopold Leopoldoritz Lirschman, of Charow. The medical society presented to him an address; in their hall a life-size portrait of the professor was unveiled and a perpetual free bed named after the professor was placed in the city hospital for diseases of the eye.

A. D. D.

ABSTRACTS.

A CASE OF ENTIRE ABSENCE OF UTERUS.

FROM ROSTOFF ON THE DUN CITY HOSPITAL.

DR. M. K. HAIROBETOFF.

(Medecinskoie Obossenii, Vol. xliii, No. 13.)

Authors case is of interest from the fact that post-mortem fully substantiated the diagnosis of entire absence of uterus, previously made.

Patient entered hospital for treatment of pulmonary disease; was of middle stature, emaciated, pale yellow countenance, skin rough from strong desquamation of epidermis. Patient never had a menstruation nor vicarious hemorrhage and in the act of coition had not experienced any sensation of pleasure. The patient, however, distinctly noticed that the usual desquamation of the skin of the body would increase once a month accompanied for 3-4 days with headache.

On examination, the mammary glands were in a rudimentary state, the small nipples indicating its position. Vaginal opening normal, admitting two fingers, both labiae majora and minora scarcely developed.

The vagina represented a blind pouch two inches in length. On the upper wall where the external os of the uterus is normally felt, a tubercle of small size was perceptible. On examination per vagina and rectum, nothing could be felt indicating the uterus or its appendages.

Patient died in hospital. Post-mortem, instead of uterus and appendages—the tubercle above mentioned was found. The peretoneum coming down straight from the bladder to the rectum, and in place of the broad ligament were lodged two fine fold of peretoneum.

A NOTE ON CALOMEL.

A. Piasetski in Medecinskoie Obosrenii, Vol. xliii, No. 12, describes in detail ten cases of heart disease treated with calomel, and forms the following conclusion:

1. Calomel is indicated in dropsy due to heart disease, accompanied with icterus. In the absence of the later this drug is contraindicated.

2. Calomel acts as a diuretic when given in laxative doses, in cycles of four days. The diuretic effect is only obtained on the fourth day and continues 24 hours after its withdrawal. The dropsy may entirely disappear in five to ten hours.

3. The diuretic effect of calomel is the second phenomenon. At first it acts as a laxative.

4. With repeated four days' cycles with laxative doses of calomel and intermediate administration of cardiac remedies, it is possible to attain substantial cure for a long time.

5. After a few such cycles, the pericardium again responds to cardiac remedies.

UNVERRICHT AKROMEGALIE AND TRAUMA.

(Munchener Med. Wochenschr., 1895, No. 14.)

The author in detail describes a case of a male patient, 31 years old, who, in 1887, during work, fell from a scaffold spraining the left arm and about the lumbar region. In addition to these injuries, symptoms of akromegalie developed, enlargement of hand and feet, hypertrophy of the tongue, bilateral hemianopsie, drawing pains in all the joints and other nervous disturbances, so as to be disable to work.

With the uncertainty as to the present discussed theories, as to the cause of akromegalie, it is possible that its etiology may associate with the injury, since a few cases reported in literature, have been noted to associate with some trauma.

NAPHTALIN IN OXYURIS VERMICULARIS IN CHILDREN.

Schwartz, in the Berliner Klinische Wochenschrift recommends naphtalin in oxyuris vermicularis in children. He in 26 out of 46 cases having received prompt and lasting effect, the remaining 20 cases giving only transient improvement. The dose in small children, 0.15, in older (12-13), 0.4, given with sugar as a powder, or in capsules, at the same time administering a mild laxative.

It should be given immediately before or right after meals. Fatty foods are to be avoided, as naphtaline easily dissolves in oil. From the quick absorbtion symptoms of poisoning may arise. After eight doses in two days has been given, there should be a pause of one week before it may be renewed.

Balzer and Locour recommend in epedidymitis yononhoica, yuaiacol ointment (2-50 to 30 vaseline). In the first few days twice, and later only one a day applied, well rubbed in, Its influence is to relieve pain at once. On the reabsorbtion of the inflammatory swelling, this remedy seems to have no effect.

At Budapest Medical University the faculty elected for the year 1895-'96, professor Dr. Andress Hogyes as dean; Professor Dr. Arpad Bokai to secretary, and Leze Michalkoritz as prodean.

A. D. D.

ON THE CURATIVE ACTION OF THE TOXINES IN MALIGNANT TUMORS.

PROF. CAMPANINI (IL POLICLINICO, No. 13, '95.

The favorable results obtained by Coley through treatment of malignent tumors by the toxines of erysipelas incited the author to follow the same method in four similar cases which came under his care. One of these was a fibro-sarcoma of the pharyngo-nasal cavum in a 12 year old boy. The second was a myxosarcoma of the glands of the breast in a 64-year old woman. Number three was a lympho-sarcoma of the neck, and the last one a malignant tumor of the prostate.

A streptococcus culture obtained from a mixed diphtheritic infection was used for the preparation of the toxines.

"The streptococci were kept for ten days, at an even temperature of 37 degrees C., and then the bacillus prodigiosus added and mixed culture left to develop for three weeks further. The cultures were then rendered germ free by heating to over 80 degrees C.

"The patient with the fibro-sarcoma of the throat had 1-2 cc. of the toxine mixture injected directly into the tumor. One half hour later the temperature increased, finally reaching to 40.6 degrees C., the patient being sensible of severe chills. The pulse went from 90 to 140 beats a minute, while the respiration was only slightly quickened. The subjective disorders were only slightly pronounced. Especially worthy of note was the extreme paleness of the skin and of the visible mucous membranes during the period of reaction, which latter disappeared after continuing more than twelve hours.

"On the tumor itself, after the injection, was a visible increase of the local temperature, paling of the central portion and formation of a hyperemic ring with hemorrhagic points. The second injection, which was given two days later, comprised 0.3 cc. of the toxine mixture. The reaction and its accompanying symptoms were the same as already described.

"The patient with the tonsillar sarcoma received an injection of 0.3 cc. on the same day. In this patient the fever which followed the injection reached a maximum height of 41.5 degrees. This was accompanied by arrangements of the sensorium and followed by the symptoms of a severe collapse, with scarcely perceptible pulse, extreme feebleness and subnormal temperature. Only with the greatest difficulty was the patient brought out of this condition.

"The extreme poisonous action of the toxines now rendered it necessary to diminish their virulence in order to be able to continue their use. This was done in two ways; first, by sterilization at 80 degrees C., followed by a second sterilization at 90 degrees C., or by dilution with distilled water in the proportion of 60 cc. water to 1 cc. of the toxines. With the toxines diluted to this strength, experiments on animals were made with the non-appearance of the more intensive reactions as the result.

"The patient with the fibro-sarcoma of the nasal cavity, was now treated with the dilute solution, the

strength of which, however, was gradually increased until finally a toxine solution diluted only 1-2 was used.

"Fever was almost nil when the highly dilute solutions were employed, but increased in direct proportion to their strength.

"During the treatment the general and local condition of the patient grew steadily worse, until finally the injections were discontinued and operative measures tried. These were unsuccessful in spite of repeated attempts, and the patient died of exhaustion.

"The patient with the myxo-sarcoma of the mamma, was treated from the beginning with the 1 to 60 solution, increasing gradually to a 1 to 12, at which strength severe fever made its appearance. Forty injections in all were used, the patient grew visibly worse, while the tumor increased rapidly in size, so that finally it was removed by the knife.

"In the case of sarcoma of the prostate, 20 injections of a 6 per cent. strength, were used. No reaction of any kind was noticeable here, but the general condition grew steadily worse, and the tumor continued to increase in size.

"The cases of fibro-sarcoma of the throat and of myxo-sarcoma of the mamma, both of which were subjected to treatment for great length of time, and where a thorough microscopical and histological examination of the tumors was made, showed plainly that the toxines exerted ab solutely no healing influence upon the tumors. No signs of a necrosis or other destructive action could be found. No signs either of any action tending to restrict their growth, but on the contrary there was a noticeably rapid increase in their growth.

"An extensive necrosis found in the mammary tumor, had made its appearance before treatment was commenced, and therefore could not in any way be attributed to the curative action of the toxines.

"The microscopical examination of the tumors showed, aside from the spontaneously developed necrosis, no signs of a diminished vitality of the tumor cells. In those places from which necrotic masses had separated were young cells. The periphery of the tumor showed likewise no signs of a healthy reaction. In isolated spots were small collections of leucocytes so that it seems possible that the irritation of the injections into the periphery of the tumors reduces the physiological resistance of the healthy tissues and is favorable to the spread of the disease.

"Of especial interest was the result of the histological examination of the tumor of the throat. Here it appeared that those portions of the tumor which on account of their inaccesible position at the base of the skull were not exposed to the action of the toxine, showed a relatively benignant structure with considerable connective tissue and spindle cells, while the histological structure of the injected portions showed a much more malignant character, for in the place of the spinal cells there was a preponderance of small round cells. The rapid spreading of the metastases in this case causes the thought that the treatment by injections may have had a pernicious influence in every direction.

"The myxo-sarcoma of the breast showed under this treatment a histological change in the sense of increased malignancy, and a rapid decline of the general health concomitant with the increased local symptoms.

"Of all the phenomena which were caused by the injections, that of the exceptionally intense fever was the most noticeable. The reaction was usually preceeded by chills, the temperature then rising rapidly and attaining a height of 40 to 41 degrees C.

"This maximum continues for about three hours, when it falls to hypothermal just as rapidly as it rose. The pulse usually kept pace with the temperature. Especially noteworthy was the deterioration in the quality of the pulse beat after the injections, the radical pulse being on several occasions barely perceptible.

"The breathing was but little affected as to rapidity, but became sterterous.

"Consciousness was troubled during the reaction, yet not wholly lost.

"The subjective disorders which came on after the injections were the worst. The principal of these were terrific headaches, dizziness, ringing in the ears, sparks before the eyes, and deranged vision, thirst, etc. Vomiting was also often present. On the vascular system and the blood the injections worked intensively.

"The skin and the visible mucous membranes took on a pale, waxy, almost corpse-like color.

"Examination of the blood showed considerable diminution in the number of red corpuscles, poikilo-cytosis, micro and makrocytis, lessening of the quantity of hemoglobin and increase of urea and uric acid after long continued injections, traces of albumin.

From the results of these observations Dr. Campanini pronounces Coley's method completely useless, and even harmful, an opinion held by Lauenstein, Kocher, Bruns and other authors.

A conundrum from the "Suffolk Dispensary:" Why do old maids always wear silk mittens? Answer: Because it would not be proper for them to have kids.

CHANDLER.

Surgery.

IN CHARGE OF

DR. T. H. MANLEY, New York.

SUPRAPUBIC CYSTOSTOMY.

Poncet (Bulletin et Memoires de la Societe de Chirurgie, 1894, Tome xx, p. 730), to whom the credit of introducing the operation in France is due, gives the following statistics concerning it: Of 63 cases 21 were aseptic, and all recovered. Of the remaining 42 septic cases 15 died within fifteen days. Of 14 cases of acute urinary intoxication, 11 survived from seven months to two and a half years. Of 24 cases of chronic infection, 7 died within a week, and 10 of the 17 remaining lived less than a year, and but 7 lived from a year to two and a half years. Of 34 cases that lived at least six months, in 12 normal urination was re-established; of the rest 7 had continence; 3 partial continence, and 12 incontinence.

THE DIAGNOSIS OF PREGNANCY IN THE EARLY MONTHS.

Landau (Deutsche Medicinische Wochen-schrift) believes that the exact estimation of the beginning of pregnancy is not possible as, apparently, the ovulation occurs independently of menstruation. The size of the uterus is in the early months also an unsafe guide. The form and consistence of the uterus is more reliable. It is enlarged evenly and in transverse diameter, so that the anteflexion is increased, the vaginal portion is drawn up, the vagina elongated, and the anterior vaginal wall appears tenser than otherwise. The consistence is softer, the sensation being as though the examining finger was pressing in soft butter, the finger passes in, finds no resistance, and returns no impression. Hegar's sign may be recognized in 30 per cent. of the cases; the same sensation as is perceived by palpating the lower uterine segment may be obtained by palpating the tubal angles. The consistence of the anterior and posterior uterine wall is irregular, usually the anterior is softer and looser than the posterior, which probably has some relation with the attachment of the placenta. In the examination attention should be paid to the fact that one cannot recognize these signs at one time, as the uterine contractions soon occur and interfere. It is necessary to examine frequently. The other usual signs of pregnancy should also be taken into account.

Landau's paper was founded upon over 200 cases of pregnancy, from the third to the twelfth week, and refers only to the normal position of the uterus.

LEUCOCYTES IN DIPHTHERIA.

1. The leucocytosis of diphtheria is materially different from that of the other infectious diseases which have been investigated in that particular.
2. Hyper-leucocytosis is in diphtheria a distinctly unfavorable sign, and,

consequently, valuable idications as to the progress of a case and the efficiency of any particular plan of treatment may often be gained from examination of the blood. 3. The diphtheria bacilli which find their way into the body are destroyed by the phagocytic action of the leucocytes. 4. The majority of the diphtheria bacilli concerned in the production of the lesion of diphtheria are cast off in the false membrane; only a very small number are disposed of by phagocytosis. 5. The action of the poison of diphtheria in inducing necrosis of cells tends to lessen the power of the leucocytes to act as phagocytes. 6. The action of antitoxic serum is to make all the cells of the body more resistant to the destructive action of the diphtheritic poison. —Gabritschewsky in N. Y. Med. Record.

UNION BY FIRST INTENTION IN NERVES.

Gluck presented before the Berlin Medical Society the case of a child of a year and a half, operated on May 7, 1895, for extensive tuberculosis in the right radius. In the operation the radial nerve was severed. After careful disinfection the nerve was sutured and then the external wound closed. Primary union of the wound resulted. After fourteen days, the first symptoms of restoration of the nerve were shown and after about four weeks the functions of the muscles supplied by the radial nerve became normal. This is the first instance of primary union in human nerves. Experimental investigations on animals show that after such nerve suturing a portion of the nerve filaments retain their vitality.—Deutsche Medicinische Wochenschrift, July 4, 1895.

THE ETIOLOGY OF PUERPERAL FEVER.

The University Medical Magazine gives the following deductions from Dr. Hermen's remarks in a discussion of puerperal fever:

1. Puerperal fever is produced by micro-organism which get into the system through wounds made in childbirth.

2. These organisms are transferred by contact. They are not inhaled or swallowed.

3. The transferrence of organisms is prevented by cleanliness, and the organisms are killed by antiseptics.

4. The hands are the usual poison-bearers, next in frequency clothes and instruments.

5. Investigation of a particular outbreak of puerperal fever should begin with inquiry into the precautions taken by doctors, nurses and midwives to secure the cleanliness and disinfection of their hands, clothes and instruments.

6. There is no such thing as self-infection with puerperal fever. The causes supposed to produce "autogenic" puerperal fever produce, in lying-in women defended by antiseptics from septic poison, only trivial illness.

7. The inhalation of sewer gas causes in the puerperal woman the same symptoms as in other persons. There is no good evidence that, in women defended by antiseptics from septic poisoning, it produces symptoms like those of septicamia.

8. The poison of erysipelas of the skin produces in lying-in women erysipelas of the skin, and no other illness. But the poison of the disease known as phlegmonous erysipelas of cellular tissue produces puerperal fever.

9. The poison of scarlet fever produces in lying-in women scarlet fever, and no other illness.

Medicine.

IN CHARGE OF
DR. E. W. BING, Chester, Pa.

CREOSOTE IN PULMONARY TUBERCULOSIS.

My own experiments, as also those of Dr. Albu, at the Moabit Hospital, in Berlin, and of others, have conclusively shown that the remedy has no influence upon the disease, and particularly not upon the growth and virulency of the specific germ. Apart from its influence upon the bronchial catarrh, creosote has a value in certain gastro intestinal derangements, but the considerations

for its preference are the same as they would be if the patient were not tubercular at all.—Karl von Ruck in N. Y. Med. Record.

The term "Uricacidemia" recently was stigmatized in these columns as a fearful mongrel never employed by educated writers. This assertion, however, is not altogether true, it seems. For in a late number of the British Medical Journal the eminent Dr. Haig employs, unreservedly, this wonderful combination of two English words and a Greek suffix. Hereafter no one will be surprised to see crop up in medical literature such vocabularly beauties as whitebloodcorpuscleemia, grapesugaruria, eggwhiteuria, gallstoniasis, stomachguttitis, etc. Verily, the English language has lost nothing of the flexibility and adaptability of vigorous youth.—Western Druggist.

PIPERAZIN IN URIC ACID DIAETHESIS.

1. Piperazin in small doses increases the urine; urine becomes clear and lowered specific gravity. 2. Diminishes acidity of the urine. 3. Lessens quantity of urea and the percentage of uric acid. 4. Piperazin, in small doses, given for a long time, does not produce albuminuria if kidneys are healthy; if they are diseased, piperazin given in small doses appears to increase albuminuria, and likewise hematuria. This ceases upon stopping the piperazin. 5. Digestive troubles not aggravated by small doses. 6. Raises blood pressure. 7. No influence on composition of blood. 8. In three gramme dose daily can be well supported by sick; rarely need for larger doses.—Nojinkoff in N. Y. Med. Record.

NOT TO BE GIVEN DURING PREGNANCY.

The chief remedies which are dangerous to the pergnant woman are salicylate of soda and ergot. Purgatives—castor oil, mineral salts, and especially aloes—should be avoided. Quinine in too large doses must also be omitted; when given at all it sroild be guarded by combination with opium.—Hugenin in N. Y. Med. Record.

TREATMENT OF CARDIAC DISEASE.

In strychnine we have an ideal cardiac stimulant, which not only acts upon the circulation, but as well upon respiration, digestion and assimilation. It is especially indicated in the weak heart of pneumonia and febrile processes, given hypodermatically in 1-30 to 1-10 grain doses, repeated until some sign of the drug is manifested. It is also useful to relieve the alarming symptoms which occur in surgical anesthesia, in the cardiac weakness often associated with neurasthenia, and in that due to depressed nerve-force. Strophanthus is of great value as a cardiac sedative in that form of tachycardia so common in exophthalmic goitre. These two drugs will retain their supremacy because of their influence over the vital centres in the medulla, to which the various systems of the body look for support and encouragement.—Krauss in N. Y. Med. Record.

ASTHMA.

At the moment of the attack, spray rapidly the back of the patient with chloride of methyl, from above downward and from below upward. The attack will cease in a few moments; if not, spray lightly the upper part of the chest. If the skin be delicate, as in women, cover the parts with a bit of fine gauze and make the strength of the spray proportionate to the strength of the patient and the violence of the attack.—Tsakiris in N. Y. Med. Record.

STARVATION.

If your patient is suffering from impaired digestion, or, in other words, starving, not from lack of food, but from lack of digestion, then prescribe Seng, two teaspoonfuls before each meal.

I say that Peacock's Bromides will do all that is claimed for it; it is much more active and certain than the commercial salts.

G. H. CHAPPELL, M. D.,
Grand Rapids, Mich.

PRACTICAL DIETETICS.

BY W. GILMAN, THOMPSON, M. D., Professor of Materia Medica, Therapeutics, and Clinical Medicine in the University of the City of New York, Visiting Physician to the Presbyterian and Bellevue Hospitals, etc. (Pages 142 and 143.)

Diastase in a vegetable ferment which has the property of converting starchy foods into a soluble material called maltose. Like the ferments in the saliva and pancreatic juice, it acts in alkaline solution, but, unlike them, it continues to operate in acid media and, therefore, its action is not disturbed by the gastric juice. Diastase is a peculiar substance which causes the ripening of fruits and vegetables by converting their starches into dextrins and sugars; hence fruit becomes more and more digestible as it ripens.

Maltine is made from three cereals —barley, wheat and oats. It is rich in diastase. It may be taken either plain, with cod liver oil, with coca wine, and pancreatin, with hypophosphites, etc., in tuberculosis and other diseases.

LEUCORRHEA IN YOUNG UNMARRIED WOMEN.

In the treatment of leucorrhea in young unmarried women, instances frequently occur in which the usual practice of making an examination to ascertain the condition of the pelvic viscera is so obnoxious to the patient, or is so firmly opposed, that the physician is forced to abandon it, and have recourse to medicine.

In such cases Dr. Slocum has learned to depend upon the scientific action which cantharides appear to exercise upon the cells constituting the genital as well as the urinary system. It is probably by direct stimulation of the cell just to the point of successful resistance that the benefit is secured, as the dose is very small. Strangury, or other unpleasant symtom, has not been produced. The action of the drug has been so uniformly satisfactory that when it fails such result forms a strong basis for suspecting the presence of something more than simple hyperemia or mild inflammation. Lessening of the discharge is sometimes noted within five days, but in several cases of profuse discharge of four years' and longer duration the treatment was not successful until after a month's persistent use.

The formula which has seemed the best contains also the tincture of ferric chloride, and dilute phosphoric acids. These though probably modifying the action of the cantharides, are only adjuvants. Following is the usual form of administration:

Tinc. of cantharides..... 96 minims
Tinc. of ferric chloride...160 minims
Dilute phosphoric acid...160 minims
Syrup of lemon.....2 fluid ounces
Water sufficient to make..4 fluid ounces

M. Dose.—One teaspoonsful in water after meals.—Calcutta Med. Reporter.

Miscellany

CHLOROFORM IN DYSPEPSIA.

BY W. S. SAMSON, M. D., FLAT, O.

Realizing the fact that medical literature is teeming with articles written by the most learned members of the profession on dyspepsia, yet we are not content with this, and will add another short article to the list, and hope, at least, to open to the eyes of the busy practitioner a field for his scientific mind to ponder over.

Of all the diseases that the physician is called upon to treat none causes him more worry, and in no disease is the result so ungratifying to both physician and patient as in the so-called dyspepsia. While the pathology of this disease is fairly understood and the means of diagnosis brought to a degree of exactness not appreciated by all, the therapy is yet quite an unsettled question. It is a conclusive fact that the American people suffer from this disease more than any other nationality, and if we for a moment consider the utter disregard they have for taking indigestible food, their love for pastries, etc., and their persistence in rapidly gulping down their meals like a half-starved hound, we are not surprised at the statistics. From time immemorial certain medicinal agents have been used in the treatment of this disease, with the vain hope of finding one with a definite therapeutical ac-

tion. What has been written on the digestive ferments would embrace volumes; and, too, every physician has one or more of them in which he imposes great confidence. What value to place upon them we are at a loss to know, and continue to prescribe them without any appreciable benefit. V. G. Stadnitzky arrives at the conclusion that chloroform markedly improves all the functions of the stomach, and the British Medical Journal suggests that the drug might prove very valuable in the treatment of various gastric disturbances, and, before all, dyspepsia. For the past three or four years I have been using chloroform in the treatment of disease of the stomach, especially dyspepsia, and it has proven in my hands a valuable and reliable remedy. Such eminent authority as Barthlow says that "chloroform is contra-indicated in all inflammatory conditions of the stomach." My experience has taught me differently, and especially in gastritis, where there is nausea and vomiting, the remedy acts magnificently. It is quite necessary to have a pure article. The commercial drug should not be used. It is known that chloroform venale contains impurities, and when administered internally produces gastro-enteritis. No class of patients are so liable to become discouraged and dissatisfied with your treatment, let it be ever so rational, as dyspeptics, and will seek advice from every physician within reach. By the judicious administration of chloroform the patient feels relief from the beginning of the treatment. It imparts a pleasant, cooling feeling to the diseased mucous membrane and excites the glands of the stomach to healthy action. The dose should be from three to ten drops three or four times a day, owing to the severity of the disease. This remedy, with lavage thoroughly and systematically performed, in the majority of cases will produce the best of results. Lavage is most beneficial in those cases of chronic gastritis where large quantities of mucous are present. Warm water is to be preferred, to which is added a small per cent. of sodium chlor. or sodium bicarb., which has a dissolving action on the mucors. In severe cases lavage should be used once daily. The diet should not be lost sight of, as it is fundamental in the treatment of this disease. We are all aware that without a well regulated regimen drugs might as well not be given in this disease; therefore a duty is devolved upon the physician that is not without perplexities. In severe cases it has been my plan to allow nothing but Horlick's Malted Milk until the disease is well under control, then gradually returning to a more substantial diet. There should be no question as to which exists, chronic inflammation or a functional affection of the stomach, before the treatment is decided upon. The chronic gastritis obstinate constipation usually exists, and such drugs as podophyllin, mercury, etc., should be avoided. Glycerine suppositories are very efficient to unload the bowels, and thereby you have no bad effects to encounter. Alcohol, recommended by no less authority than Osler, is, in my opinion, contra-indicated, and when used in dyspepsia only aggravates the disease. The appetite is more liable to be cultivated for alcohol when taken on a diseased gastric mucous membrane than when it is in a physiological condition.

Let the deductions drawn from this article be unbiased until a fair trial of the drug herein recommended, in a suitable number of cases, proves the writer's observations erroneous, or the height of your zenith shall have been reached in a remedy that will prove most beneficial to the sufferings of the miserable dyspeptic.—Courier of Medicine.

TIC DOULOUREUX.

Treatment consists in making subcutaneous injections of the following solution into the affected side of the face: Distilled water, 10 grammes (2 1-2 fluidrachms); antipyrin, 4 grammes (1 drachm); hydrochlorate of cocaine, 0.003 gramme (1-2 grain). The face sometimes became much swollen, but soon resumed its normal appearance.—Grandiclement in N. Y. Med. Record.

TREATMENT OF GALLSTONE.

Dr. W. J. Mayo, of Rochester, Minn., contributes an article to a late number of the New York Medical Journal on gallstone disease. He says that, according to some observers, 10 per cent. of males and 25 per cent. of females have gallstones. From a study of 1500 autopsies Schroeder estimates that 12 per cent. of adults and 2 per cent. of children are afflicted with gallstones. Some writers are of the opinion that only about 1 per cent. of those who have gallstones are made aware of their condition by symptoms. Dr. Mayo says that when the gallstones are free in the gall bladder they do not produce symptoms of a very definite nature. It is altogether probable that many cases of dyspepsia depend on gallstones. The surgical treatment of this affection is fully discussed. In speaking of the medical treatment he says:

"It can be asserted without fear of contradiction that there is no medical treatment of gallstones; it is wholly surgical. We cannot in the living body dissolve these calculi, although much can be done for the relief of the disease in a non-operative way when the stones are confined to the gall bladder itself. The internal administration of remedies which increase the rapidity of the biliary flow has a deserved reputation in preventing the formation of stones, phosphate of sodium, or a course at the Carlsbad or other saline springs being most popular. As the passage of food through the duodenum is particularly apt to bring on a colic, the use of remedies calculated to allay any existing duodenal catarrh may be of aid, and the avoidance of such articles of diet as the patient soon learns to know as being most liable to start a colic. Glycerin has of late been lauded, as well as many copyrighted preparations of enterprising drug firms. Such allegations are supported by uncertain evidence, derived from the fact that intervals of quiescence are frequent, or based wholly upon the imagination of the owner of the copyright. Olive oil at one time had a great reputation, the examination of the stools after its administration showing quantities of soap balls formed by the action of the intestinal alkalies and shaped by vermicular action. For the relief of pain caused by a temporary blocking of the cystic-duct opening hypodermic injections of morphine, or even chloroform, may be required."

Another interesting article on this same subject is contributed to Medicine by Professor A. H. Ferguson, of Chicago. This article also calls attention to the fact that there is but little to be promised from medical treatment. The sufferer must be relieved by the application of fomentations, and the hypodermic administration of morphine. The surgeon should be called in consultation before the disease has made too much progress. Dr. Ferguson enters into

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In the treatment of the milder grades of gastric and gastro-intestinal catarrh Adjunct Professor Eshner prescribes sodium phosphate in doses ranging from fifteen grains to a dram. The larger doses are used when constipation is present; the smaller when merely a detergent and antacid effect is desired. The drug is directed to be taken in hot water, always before meals, sometimes only in the morning, at other times thrice daily. The concentration varies with the end to be attained, large quantities of water being used when the catarrhal condition is pronounced, minimal quantities when a laxative effect is desired.—Philadelphia Polyclinic.

In the late case of Amick vs. Reeves, in Chattanooga, the defendant showed that all the parties whom Amick claimed to have "cured," in and around Chattanooga, were dead. Now another one of the dead "cured" is heard from. This time Mr. S. G. Sea, formerly an important employee of the Amick Company. It has not been very long since his circular letter, announcing his remarkable "cure," was scattered broadcast over the country. This concern, we believe, is still being advertised by some reputable journals!—Atlanta Med. and Surg. Journal.

COLLEGE OF SURGEONS
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Original.

DIAGNOSIS OF BILIARY CALCULI CONFIRMED BY EXPLORATORY INCISION.

BY J. AMBROSE JOHNSTON, M. D.,
Cincinnati, Ohio.

Read before the Cin. Obst. Soc. June, 1895.

Since the year 1565 when Johann Kentmann, of Dresden, first observed gall-stones, until now, the profession has always felt the liveliest interest concerning the subject of biliary calculi. The last decade seems even to have added a new interest, dependent largely upon the success attending operative treatment of this serious and painful malady. Prior to the time when operative treatment was resorted to, as regards the pathology, diagnosis and treatment of the forms of disease produced by gall-stones, medical literature teemed with materials which, from their extent, it is scarcely possible to review. To-day no small space is occupied in our journals by the reports of gall-bladder operations, yet even with this plethora of gall-bladder literature, we read with avidity anything that would seem to give us more light on the diagnosis and treatment of a disease of so great moment and prevalence. Consequently, I report the following case, which gives a composite picture of the early symptoms of gall-stone cases and which exemplifies how at variant stages of the disease the symptoms do not present themselves synchronously, but one manifesting itself one time and one or more at another.

It is those cases giving the lighter symptoms that are the most difficult to diagnose, and they are the ones which are the easiest to operate upon successfully.

Mrs. R., aged 22 years, was seen by me in the spring of 1894. She complained of excessive pain in the right hypochondriac region. Being pregnant at the time several months, the excrutiating pain caused premature labor, from which she easily recovered. Some few days after delivery I felt an enlargement at the site of the gall-bladder which appeared to be two inches in diameter and was easily palpated on account of her thin and lax abdominal walls. Inquiring into her history I found that she had been having attacks of periodical pain for four years. Though not jaundiced I believed there was obstruction in the biliary passages, probably due to biliary calculi, and so informed her. She did not accede to the proposed exploratory operation at this time. A few months later a recurrent attack coming on, I was called to see her, and at this time could not make out any enlargement at the site of the gall-bladder, but from what I knew of the case I still adhered to my first opinion. I proposed operative interference again, to which proposition she readily acquiesced. The operation was done at the Presbyterian Hospital, October 3, 1894. The exploratory incision, for the confirmation of the diagnosis, was made beginning at the right rib margin and extended downwards along the outer margin of the right rectus muscle for three

inches. The gall-bladder was found non-adherent, one inch in diameter and filled with 45 stones, which were removed in the ordinary way, and the patient made an uneventful recovery.

There is nothing unusual or extraordinary in this case. It fully typifies the course taken by the majority of gall-stone cases in their early months or years; and, as usually seen by the physician, present only the symptom of pain. It is the meagerness of symptoms—so far as variety is concerned—that permits these cases to run without a positive diagnosis and lose the opportunity when the surgeon's knife might avail them much. Had I not seen this case at the time she had the premature labor, and felt what I supposed was the enlarged gall-bladder, I could have been guided in my diagnosis only by the paroxysmal pains she had. It is such cases as this, periodically harassed by pain, unattended by jaundice for an indefinite period, not invariably marked by a distended gall-bladder, that physicians are likely to let go from bad to worse because they have not a group of symptoms to decide them what to do. In this case, uninterfered with, possibly, the stones would have passed into the common duct, one by one, and have occluded it for so long a period, if not permanently, in their passage that the cholemic condition would inevitably have compromised her prospects for a long and healthful existence. Had we waited long enough until the stones passed into the common duct, we could have had the symptoms of jaundice, clay-colored stools and pain, but at what a cost to her chances of recovery if it became necessary to operate for the removal of stones from that duct, on account of their inability to pass onward into the intestine.

There is no question but that an early diagnosis of biliary calculi is desirable, when we consider that it is the cases operated upon early, before the stones become wedged into the common ducts and always attended by jaundice, that give the highest percentage of recoveries. Statistics on the mortality of operations on icteric and non-icteric cases are not yet available that can be called accurate, but so far, about 50 per cent. for the former and about 6 per cent. or less for the latter will in all probability be shown to be the ratio in the not distant future.

Exhaustion from recurrent attacks, collapse from excrutiating pain, empyemia and dropsy of the bladder with constant danger of rupture, jaundice progressively interfering with assimilation and nutrition, perforation of the bladder or ducts from ulceration with its consequences, and according to some the liability of the constant irritation causing cancer, are among the dangers which urge us to make an early diagnosis.

Then aside from the danger to life there is the ever constant danger, in those whose symptom is excrutiating recurrent pain, of becoming an opium habitue.

Procrastination in the early stages of this trouble often robs us of our only chance to relieve with any degree of safety.

The positive diagnosis of biliary concretions is no easy matter. The most erudite and experienced physician will occasionally err. Cholelithiasis is the possessor of a great number of symptoms, yet it is not possible to name one of them or a group of them for the purpose of making a diagnosis which will invariably be positively diagnostic. A stone or stones in the gall-bladder may be perfectly harmless and give rise to either no symptoms or mild symptoms that simulate those of other diseases in this vicinity. In such cases we cannot make a diagnosis from the clinical history, and have no business resorting to exploratory puncture with the aspirating needle, and very little justification to employ exploratory incision. There are symptoms, however, which, if properly interpreted, indicate biliary calculi and determine the course that ought to be pursued.

Pain referred to the right hypochondriac or epigastric region, abruptly developed, or in some cases preceded by a sense of uneasiness in that locality, may radiate to any part

of the body and is the symptom that most frequently invokes the aid of the physician. Usually there is more or less tenderness over the site of the gall-bladder, but occasionally even pressure affords relief. Most frequently the pain is caused by impaction in the cystic duct, then we have for our symptoms pain and a distended gall-bladder, which can be felt if the walls are not too thick or if they are sufficiently relaxed; if the impaction is in the common duct we have pain, jaundice, clay-colored stools and a distended gall-bladder, which can be felt if it be not rudimentary or atrophied and the abdominal walls not too thick; if the obstruction be in the hepatic duct we have pain, jaundice, clay-colored stools, and possibly a distended gall-bladder from an obstruction in the cystic duct. If the obstruction lasts for months or years, the organism may become accustomed to its presence and present very slight or no symptoms; these are the cases which give us a false security, too often leading us into the delusion that our patient is cured, possibly by some new-fangled treatment. It the common or hepatic ducts are occluded cholemia continues as long as the obstruction exists. The foregoing symptoms will make a presumtive diagnosis.

Gastralgia, saturnine colic, ulcer of the stomach and intercostal neuralgia have points of analogy in their symptoms which will make an attack of either resemble one of biliary calculi; but usually by scanning the history of the case these diseases will be differentiated.

Having the history and other signs of biliary calculi to guide us, we can bring to our aid for the purpose of diagnosis: Palpation, percussion; urinary analysis, the thermometer (Fauconneau-Dufresne says a local elevation of temperature is shown), the stethoscope (in conjunction with palpation), the exploring needle and exploratory incision.

The history, together with palpation and percussion, must be our chief reliance for making a probable diagnosis, urinary analysis; the thermometer and the stethoscope can give us but little help, and the exploring needle is not of much service.

Sounding for gall-stones with a probe passed through a canula or with a fine aspirating needle thrust through the abdominal walls has been successful in revealing the presence of biliary calculi. This maneuver is not devoid of danger. Death has been known to follow this, what in the minds of some is deemed "an easy and safe" operation. You who have seen ascitic fluid trickle from the trocar puncture through a thick abdominal wall cannot be made to believe that a fine aspirating needle or trocar can be withdrawn from a distended gall-bladder which, perhaps, contains pus without the oozing out into the peritoneal cavity of more or less of its contents, and usually with what result! Even were there no danger of fluid escaping from the gall-bladder, the moment a needle is thrust through the abdominal walls, the liver and gall-bladder descending beneath the diaphragm at each inspiration may cut themselves on the point of the needle as it projects into the abdominal cavity, wounding organs which are very vascular. Too frequently is the gall-bladder so small or atrophied that it would be impossible to tell where you are in it. I have seen a gall-bladder that was only about one inch long, and another case with stones in the common duct, accompanied with extensive adhesions that seemed to have no gall-bladder, in neither of which cases could one have introduced a needle and diagnosed stones, yet in both cases they were present in the common duct. It would have been just about as easy to have discovered them with the aspirating needle as it would be to find a needle in a haystack.

The use of this method might or might not show the presence of biliary calculi, but would not show their absence. Under no conditions whatever would I consent to this maneuver or look with favor upon it as long as we have another method which is almost devoid of danger if the rules of asepsis are strictly regarded, and which will reveal the

true state of affairs in that vicinity. I have nothing but condemnation for sounding with the aspirating needle.

Pain, attended with a palpable gall-bladder or not, recurring every few weeks or months and requiring large doses of morphia to subdue it, is a sufficient indication for exploratory incision. Cholemia which has lasted several weeks or months without abatement, attended with pain or not, attended with a distended gall-bladder or not, is a sufficient indication for exploratory incision to confirm our diagnosis and reveal our duty in the premises.

The only positive sign of the existence of biliary calcui in the gall-bladder is to see or feel them through an incision made in the abdominal walls.

Warned by the ever recurring tormenting pain in the hepatic region or by jaundice of long duration, cognizant of the uncertainty of subjective symptoms, mindful of the elusiveness of gall-stones in that they leave the gall-bladder when least expected, we can confidently resort to that procedure—exploratory incision—which, if we simply use it to make a diagnosis and obey the laws of asepsis, will be of little danger, and clear up what has been only conjectural. Though one should not find stones he will probably find conditions that will require surgical attention. It is better to occasionally not find what you seek for than to let all obscure cases go wthout giving them the benefit of exploratory treatment.

The cutting down on a distended gall-bladder, the removal of its contents and the fastening of it in wound for external drainage, is a simple and comparatively easy operation, and the on-looker often marvels at the ease with which gall-stones are excised. Such cases are the rule, but there are exceptions which try the mettle of the surgeon. Not only must the operator be able to do a cholecystotomy in a distended bladder, but he must know how to dispose of a small bladder which will not come into the wound for external drainage; he must know when and how to remove stones from the ducts, by pushing them onward into the intestine, by extracting them with forceps, and by cutting into the ducts whose repair with the suture is no small task. Then from inability to open the ducts closed by foreign bodies within, by pressure of tumors from without, or by adhesive inflammation or cicatrization of ulcers, the switching of the bile by anastomosis into the small intestines, is a problem to be quickly decided.

Though through an exploratory incision, justified by symptoms of gall-stones, no stones are found, other conditions are very likely to be present which will demand attention, and no one need censure himself for having made a mistaken diagnosis of gall-stones.

A PRACTICAL STUDY OF THE BLOOD AND THE CIRCULATION, WITH A HISTORICAL REVIEW OF THE SUBJECT AND ITS BRIEF CONSIDERATION FROM THE STANDPOINT OF ITS CHEMICAL COMPOSITION, ANATOMICAL STRUCTURE, AND PHYSIOLOGY; INCLUDING CLINICAL STUDIES, AND EXPERIMENTAL RESEARCH ON THE LOWER ANIMAL.

BY THOMAS H. MANLEY, M. D., NEW YORK.

Continued from last number.

PART VIII.

THE HEMATIC CONTENTS OF THE CAPILLARIES.

During the past year, while examing specimens of freshly drawn blood, I had not proceeded far before it became evident that the number, arrangement, movements and general characters of the blood corpuscles varied very greatly in blood drawn from different regions of the same body under altered physiological conditions; and in disturbed conditions of health it was also obvious, too, that the behavior of the semi-minute bodies widely varied in different stages of life. My mode of procedure

was to secure pure aseptic blood, using the scarificator or cupping-glass. Many patients will object to anything suggestive of experimentation, but when we resort to a ruse, innocent in its effects, and often most potent to relieve pain, no objection is offered. In order to extend this line of research to the living animal I secured several colonies of frogs, and through the transparent tissues of their various structures a marvelous radiance is cast on the hematic machinery, while under the influence of vital impulses. The tongue, the lung, the mesentary and digital webbing, were the parts selected. But when the pup or kitten was employed only the mesentary availed with the microscope.

Amid the vast number of bewildering phenomena that first excited my curiosity and engaged my attention, after acquiring a fair mastery of the necessary technique, in the living microscopy, was that there is a vast difference in the morphological characters of the corpuscular elements of the blood in motion, and that removed from the body. The red corpuscle of the frog is large and ovoid with a distinctly crescentic mucleus when out of the vessel in aquiescent state. A blood corpuscle, Dr. Carl Heitzman says, has no distinct limiting membrane, but only a thin layer of elastic contracting living matter. Hayem has found that the red corpuscle is extremely susceptible to trauma. The batrachian's blood corpuscles are nearly twice the volume outside the body that they are in the vessel and are widely different in contour. Its contracting, limiting rim of living matter has lost its vital principle, and hence allows for this great expansion prior to its bursting and early disintegration. Similiar changes are noticed in the leucocytes and the hematoblasts. But there was another prominent feature noticeable in the moving file of corpuscles that struck me as quite incomprehensible; viz.: that other clearly defined bodies were seen carried along adherent to the capillary wall wedged into a stroma, or outside, that were absolutely impossible of detection in the withdrawn blood of the same animals in its natural state, or on staining with osmic acid. These elements are so sensitive as to immediately perish on exposure. But what are they that we do not find them in their natural state after the blood is withdrawn? Do they also circulate in the arteries and veins? That we are unable to say, because the thick walls of these vessels and the density of their contents render microscopical examination of them quite impossible while in motion.

These bodies no doubt are exclusively vascular, as only the fluid elements of the blood pass uninterruptedly out of the vessels into the tissues, and in turn out, back again, after they have served their purpose and, charged with residual elements, enter the vessel again. It is very probable, too, that the red and white corpuscles leave the capillaries to enter the lymph-paths; this diapaedis or transmigration can probably only occur under normal conditions in a slowly moving current of blood. It takes place without injury to the vessels, the wandering elements to again find their way back into the circulation, through the lymph vessels. Some have believed that these wandering corpuscles or hematic elements constitute the buds of the later growth of the connective tissue cells; the mucous salivary, or lymph corpuscles, and the round white corpuscle, of the white and gray substance of the central nerve structures.

Consequently the fluid as well as the corpuscular elements of the blood have a double way of return from the capillaries to the heart, by the veins and by the lymphatics.

The mixed elements which we see in the living blood moving in the capillaries are concerned in those minute but active changes called into play in the process in the regeneration of structure and preservation of nutrition. And it is highly probable that the instant the blood leaves the body, although its vitalizing potency is not altogether lost, it is greatly reduced. If coagulation has occurred, decomposition has most certainly set in, simultaneously extending to all its fine elements. This in-

terchange of elements on the part of the capillaries is general, and extends to all the various structures. These vessels will take up staining fluids from the periphery and filter them off, changed and unchanged, by the different organs, and again similar substances taken in by the stomach are finally disposed of by the capillaries in the connective tissues. When certain substances are applied to local parts, which annul sensation, it is assumed by many authorities that they act directly on the nerves, independent of the circulation. The medicament must be absorbed, however, in order to reach the nerve filaments. But absorbed and diffused by what, if not by the capillaries? Clearly then this is an erroneous view. The toxic elements are first taken up by the extra capillary plasma and other tissue juices, and carried into the vessels and from there diffused through the tissues for the time, so affecting the tissues as to isolate them from all neural impressions.

Capillaries, though containing no muscular fiber, yet possess contractile power, though this property is only witnessed in a general way when there is a disturbed state of the circulation. The relation between the capillary and its contained fluid elements is reciprocal. Here we find all the ultimate complex and finer changes occurring; chemical transformation when the pulling down of the old and building up of new materials give rise to new forces. Every single corpuscle has its part to perform, and may be regarded as an independent entity. Perhaps of the 5,000,000 which occupy each cubic millimetre of the blood but a small proportion are simultaneously employed in metabolic changes, the remainder being a reserve, or in some manner concerned in functions of which we are yet in ignorance. By an extended and minute examination of a capillary territory in an extremity, we will notice that many of the finer ones alternately fill and empty at one moment, being the seat of very active motion, and in another stuffed with corpuscles in a state of rest.

This would point to the conclusion that limited corpuscular rest or capillary stasis is physiological, and that though the heart is in incessant motion, a considerable proportion of the corpuscular elements which it moves onward are for varying periods in a quiescent state; particularly this must be the case with many of the excretory glands.

(To be Continued.)

Society Reports.

CINCINNATI OBSTETRICAL SOCIETY, JUNE, 1895.

DISCUSSION OF DR. JOHNSTON'S PAPER.

Dr. Hall:—

Mr. President. I want to congratulate the essayist on his very clear and concise paper. I think he has said and well said that an uncomplicated operation for stones in a distended gall-bladder is one of the simplest operations in abdominal surgery. He has also outlined the difficulties to be encountered in complicated cases, and it is to these difficulties I want to confine my remarks. I don't believe the technique of gall-bladder surgery is yet complete, and that we have any hard and fast rules to guide us in these operations. When the operation was first proposed we all felt very sanguine that we were going to have easy sailing, and cure all our cases with ease and certainty—at least we hoped to do so. While it is true that in those complicated cases, or ones with complications easily overcome, the operations are safe for the patient and satisfactory to the physician and patient. But the more I see and do of this work the more I am convinced of the fact that there are cases that will put the best operator to his wit's end, and embarrass him in more directions than one before he completes the operation satisfactorily to himself. In reading the literature of the subject as we have it to-day in the medical journals, I have been impressed very forcibly with the favorable reports of how operators overcome difficulties, and I have been also impressed with the scarcity of literature upon difficult and complicated operations.

With the exception of certain operators, I see reports of but few complicated cases in the literature. I feel convinced, from my experience in this class of work, that such cases do occur in the hands of all operators. The difficult and complicated operations must come in a given ratio or proprotion. Now, how to overcome these difficulties I am not here to answer. But I want to point out a few difficulties that are certain to be encountered in this line of work. Among the most prominent is one that was mentioned by the essayist: Stones in the common duct. But I assure you that is not the most difficult problem to solve in these operations. I am satisfied stone in the common duct can be dealt with as well as in the other ducts or in the gall-bladder. But with a thin gall-bladder, filled with a number of small stones or a large stone, contracted down until it is an inch or an inch and a half long and the size of your little finger perhaps—and the gall-bladder no thicker than a piece of paper—and so friable you would rupture it in removing the gall stones,and the case will, indeed, be a difficult one to deal with. I have encountered just such case. If we have stone in the common duct with cartilaginous deposit long standing, either side of the stone leaving room enough for a small part of the gall to be driven on into the intestine—and this is not an imaginary case, for I have seen such cases—these complications are not easy to overcome. With malignant growths complicating stone in the common duct or in the gall-bladder, even if the difficulty can be overcome by anastomosis into the intestine, the operation is not always easy, although it may seem easy in theory. If you have a gall-bladder that is fairly healthly or distended, then with a Murphy button or any other device you can anastomose the bile; that may be easy; but I as-with the intestine and switch off sure you, if you keep at it long enough, you will find cases of a contracted gall-bladder in which you cannot do this. One of the most difficult problems to solve in my experience is to take a case like the one mentioned, with a small contracted gall-bladder practically destroyed and the cystic duct so obstructed that if you remove the stone you cannot get a satisfactory opening through it into the intestine, and an anastomosis of the gall-bladder with the intestine is out of the question. This is a difficulty that is not easy to overcome and one that will probably end in disaster—death. I assure you the operation as a rule—in the majority of cases in my experience—is a very satisfactory one. But it is in reference to the complicated cases and how to overcome difficulties I wish to hear the opinion of the members. I assure you, that, to my knowledge, in more than one man's experience, in cases of stone in the common duct, it is impossible to bring the gall-bladder up to the peritoneum; it is impossible to make an intestinal anastomosis, and you cannot remove the gall-bladder because you must make some provision for the gall that is bound to be turned out in the next few hours after operation. I believe it is a duty to ourselves and our patrons to look for these complications in every obscure bladder operation, and be prepared to deal with them promptly.

In reference to the diagnosis in these cases, I think the doctor dwelt upon that very thoroughly, and I practically agree with what he had to say. There is one symptom he mentioned which I think deserves more than a mere mention, and that is the locality of the painful point in the early history of gall stones. The pain is not in the region of the gall-bladder; it is not in the region of the liver. If you recall these cases the location of the pain in every one is exactly in the middle line. That is a point that has not been dwelt upon by writers, nor have I seen it mentioned in the journals, but in my opinion it is worthy of mention. For months or years these patients complain of pain, always in the middle line, supposed to be almost everything else except gall-stones.

Dr. Zinke: Did you ever observe a case in which a stone was mistaken for cancer, and upon operation the true condition was shown?

Dr. Hall: I cannot recall a case now, doctor, in which all that occurred. I have knowledge of a case in which a diagnosis of malignant disease was made, and the autopsy revealed a single stone in the common duct and no cancer. I have operated upon a few cases in which we found gall-stones and cancer. Dr. Reed will recall a case, several years ago, in which I removed several gall-stones and a cancer in the region of the gall ducts. And while we are on that subject, in answer to the doctor, I will say this: In a late stage of the history of a case of gall-stone, where malignant disease is present, it is not easy to settle the question of malignancy, and I believe it can be done only on presumptive evidence until exploration is made. I remember two or three years ago seeing a case in Williamsburg, O., of a man who had lived in Texas. He had a history of gall-stone extending over several years, and I saw him with his physician. The patient had lost much flesh, was jaundiced, the liver enlarged to two inches below the ribs. He was bleeding from the gums, and there was every indication that he had not long to live. I believed he had gall-stones and so stated, but did not believe it was a case that promised anything from the operation, and advised not to operate, because it was fair to presume that he had malignant disease as well. The man died a short time afterward, and autopsy proved that he had a number of gall-stones, one in the common duct, and a cancer about the pylorus. That history is similar to a number of cases that have come under the observation of myself as well as of others. I remember a few years ago, when I first suggested gall-stones being the cause of cancer I was made the butt of a number of medical jokes about town, but I have since investigated further, and I believe there is more than presumtive evidence that the long-continued irritation of the parts from gall-stones predisposes to malignant disease.

Dr. Reed:—

Mr. President: I think one of the most serious complications that we encounter in practice is not the clinical condition that we have revealed to us by operation, so much as it is the fact that we meet these cases after prolonged delay, which leads to these complications. The most serious thing is the inability of practitioners to extend early recognition to these cases. A number of instances, illustrative of this fact, have come under my observation. I recall a case, from which I removed 123 gall-stones, that had been under treatment by various doctors for chronic dyspepsia, giving rise to gastralgia. The case was one in which intermittent paroxysms had never occurred, and there had never been a history of hepatic pain nor of this median pain (which, however, is a very important distinction). For three years, as she said, she felt herself too short in front and unable to stand up with any degree of comfort. I removed a number of stones, and then found one obstructing the hepatic duct. I think I exhibited those stones. The patient has been well since. Then, we had the persistent pain, which was worse a couple of hours after eating. There was some dyspepsia; there were some gaseous eructations from the stomach. The accumulations of gas in the stomach increased the pain, which was never paroxysmal, but always persistent.

Now, there is not much occasion to add to what Dr. Johnston has said about the obscure symptomatology of these cases. Sometimes they come on with a peculiar insidiousness; at other times very suddenly, and yet the character of the pain may not be of that sharp lancinating kind that we speak of as being peculiar to hepatic colic. I remember of hurrying to the case of a practitioner, which he said was a floating kidney that was strangulated. The pain was referred to the lumbar region. On examination, a tumor corresponding to the region of the kidney could be felt. We made an incision, found an adherent omentum; pulled it back and found an enlarged gall-bladder fastened down to the renal capsule; and that gall-bladder was simply occluded by the impaction of the cervical end of the gall-bladder by a large

mulberry calculus, not large enough to give the pain peculiar to hepatic colic, but simply a dull, heavy pain, which had confirmed the doctor's belief that he was dealing with a strangulation. I don't believe that anyone could determine—however erudite the sensibility of the practitioner or even of the specialist—that the tumor was any other than simply an enlarged kidney. I confirmed the opinion of the practitioner on my preliminary examination. There was apparently really no trouble with the kidney. Now, that is another variation in the symptomatology of these cases, and a very important variation it may be in a given instance.

Something has been said about the complications, but I wish to discuss one which has not been mentioned. That is posterior cicatricial contraction of the common duct. Given a common duct through which a number of calculi have made their transit or that has been injured by the long impaction of a stone, and that duct has undergone changes which will lead to cicatricial contraction. It is kept open and rendered patulous by the elasticity of the bile. Now, you operate, doing the old operation, fix the fundus of the bladder in the abdominal incision, relieve the duct of the biliary pressure, and there is nothing to keep it in distention and it contracts. I have seen three cases of that kind. One case was operated upon in Colorado Springs by Dr. Charles Penrose, of Philadelphia, and came under my care afterward. I wrote to Dr. Penrose, and he said he had removed a stone by disintegration. When I called to see the case, the wife, who acted as the nurse, simply went to the patient, removed a plug and withdrew some bile—it was a splendid case for the physiologists, but which, unfortunately, was not utilized. I used the Murphy button and got a very good recovery. The case was in the practice of Dr. Adams, of Dayton, O. Another case I operated upon over a year ago and did a cholecotomy, removed through the incision three large calculi and closed the incision with sutures. The patient made a good temporary recovery, but the stools continued pale, and once in awhile the sinus would reopen under the pressure of the bile current. I operated upon her, and found the cicatricial contraction, but did not do an anastomosis, because there were adhesions among the intestines that rendered it impracticable. The woman subsequently died of malignant disease, cancer of the uterus. From the third case I removed a number of calculi, which I exhibited to one of the local societies. There was a recurrence of the clay-colored stools. The woman has made a beautiful recovery, but it is an instance more typical than the former of cicatricial contraction of the biliary duct. This complication I do not remember seeing noted in the books, but it is one that certainly exists.

I think the general review of the subject by Dr. Johnston is one that has placed us under obligations to him, and I am certain his paper will be of value in the literature of the subject.

Dr. Zinke:—

Mr. President:—The subject of biliary calculi is of extreme interest to us all; but I have been particularly instructed not only by the essay, but by the remarks that have been made by the members present. I have never operated for a biliary calculi simply because I have never seen a case that required operation at the time of my attendance. All the cases that have come under my observation have recovered without operation. Still, judging from the experience of others and from the cases I have seen with other gentlemen who have operated, I can well appreciate the difficulties which surround many of these cases.

But I want to draw out, especially, the difficulties which attend the diagnosis of some of the cases of gall-stone. I remember one case that came to me some time ago, in which subsequently either one or a number of gall-stones were removed, although there was not a single symptom of gall-stone present at the time I saw the patient. She was a person 34 or 35 years of age, and presented a typical history of dysmenorrhea,

with great tenderness of the uterus and a profuse discharge. There were on other symptoms in the case. I suggested for her relief, currettement. The patient concluded to have the curettement done, but afterwards she was influenced by a friend of hers to seek the advice of a professional brother. I don't know that he at the time made the diagnosis of gall-stone, but when I made inquiry as to what had become of the case, the gentleman, who had brought her to me, told me that she had been operated upon and that a gall-stone was found.

Dr. Palmer: How did it affect the dysmenorrhea?

Dr. Zinke: I don't know. We will probably hear from the operator, who is present, this evening.

The othercase, that has greatly interested me of late, is a lady, quite prominent in German circles, who has been bed-ridden for several months and has lost flesh rapidly and extensively. She has wandered from one physician to another; none, it seems, were able to make a diagnosis of her case. A friend of mine, a very conscientious and competent practitioner, was called in consultation something like six weeks ago, and after making a most careful examination of the fluid ejected from the stomach, made a diagnosis of carcinoma ventriculi. Shortly after he was obliged to leave the city, and a homeopath was called in, who is now treating the patient for biliary calculus. She is getting better, apparently recovering rapidly, after having passed a number of gall-stones. So the diagnosis of carcinoma ventriculi is apparently knocked in the head. The symptoms which indicate the presence of gall-stone are certainly very numerous and very often quite masked, so that the best and most skillful and observing gentlemen may at times be led astray in their opinion in this kind of cases.

Dr. Stark:—

Mr. President: It was not my intention to say anything upon the subject of the paper of to-night, but the case referred to by Dr. Zinke reminds me of one in my own family, that of my father, which, on account of the difficulty in diagnosis, I would like to recall. My father had for years pain in the epigastric region, directly in the median line, as mentioned by Dr. Hall. He began to lose flesh, and finally took to vomiting and had pains of a very severe character, which were considered to be gastralgic at the time. The emaciation continued and he was scarcely able to keep anything on his stomach, and a diagnosis of carcinoma ventriculi was made by a number of eminent local physicians. He also consulted a number of physicians in Buffalo and New York, who entertained the same opinion. He finally concluded to have the supposed carcinoma removed, but it was found to be gall-stones. Among the most prominent symptoms was the vomiting of food after being in the stomach four or five days. It looked like a dilatation of the fundus, due to stenosis of the pylorus. Great quantities of food were ejected, but during the operative exploration it was found that the stomach was really small.

Dr. Johnston: Any adhesion about the stomach or intestines?

Dr. Stark: I do not know about that. He was found to have a small cirrhotic liver, and a small gall-bladder which was sewed into the wound and subsequently torn loose. The case, in all its features, certainly simulated cancer of the stomach, and was so pronounced by some of the best men in the country.

I also want to refer to a case which I met with which puzzled me for a short time. A young lady, 25 or 26 years of age, had periodical pains in the epigastric and right hypochondriac region similar to those of gall-stone colic. Finally she passed segments of a tape-worm, and when relieved of the tape-worm had no more trouble.

I also wish to emphasize the fact of the presence of pain in the epigastric region. All my patients complain of pain in the pit of the stomach.

Dr. Palmer: Did your father have attacks of jaundice or clay-colored stools, or bile in the urine?

Dr. Stark: No, sir; at no time.

Considerable has been said about

the necessity for operation in cases of gall-stones, and I want to dwell a little upon when not to operate.

I think I operate upon the very fewest of them. One of the cases that would demonstrate the non-necessity for interference was one I met with in the very beginning of my practice. The patient was a young woman, weighing perhaps 100 pounds, in whom you could palpate quite readily all the palpable viscera. She had pain thought to be due to gastralgia. I saw her subsequently during one of these attacks, and found a very large gall bladder. Dr. Connor coincided with me in the diagnosis of gall-stone. She has not had an attack since. Only seven or eight months ago she was in bed for something else, and I begged the privilege of examining her, and found the gall bladder considerably enlarged. The treatment was simply palliative at the time. Of course, we have all met with patients who have gone to Carlsbad and after their return have had no more of this kind of trouble. A patient of mine went there last year and passed a few gall-stones, and has had no trouble since. A friend of mine, who, during a period of 15 years, had repeated attacks of gall-stone colic, went to Carlsbad 10 or 11 years ago. He does not know that he passed any stones, but has had no gall-stone colic since. So, surely not all the cases that come to our hands require operation. I would class among the operative cases, the following:

Those with suppurative gall-bladder and hectic symptoms, those with stone in the cystic duct, producing such constant and severe pain as to require the too frequent use of morphia, and lastly, those of impacted stone in the hepatic or common bile duct threatening the life of our patient through cholemia.

Dr. Palmer:—

Mr. President: The remarks of the last speaker cause me to make a few remarks. I have never seen a case of biliary calculi that required operative procedure. That is sometimes required, but should be recognized certainly as a dernier resort. Some patients have been told that Carlsbad Springs, Germany, are very efficacious, and they have often been very greatly benefited by them. One patient was frequently attended by me for attacks of pain, which I finally came to recognize as due to gall-stone. He went to Carlsbad Springs, and I think has entirely recovered. He has not had an attack for a good many years. There are other very excellent remedies in the treatment of this disease. Some of these patients can take the Carlsbad salts, which we have in this country. Other remedies are the phosphate of sodium and the salicylate of sodium; and I think any one of these three remedies should be given pretty constantly, over a series of months before an operative interference should be thought of.

Dr. Johnston: Doctor, how do you think those remedies work? By dissolving the stones?

Dr. Palmer: Yes, sir.

Dr. Hall:—

Mr. President: I want to raise a protest against the remarks of the last two speakers in reference to non-operation and the medicinal treatment of gall-stones. I don't belive any remedy will cure a patient with gall-stones. All remedies are simply for the comfort of the patients—Carlsbad not excluded. A patient operated upon not long ago had all these remedies for 12 years, and, finally, had a stone driven into the common duct for nine months, profound cholemia, and operation; leakage from the common duct, peritonitis and death. A perfectly easy operation for stone in the gall-bladder—such a one as we could do with perfect result 94 cases in a 100 was converted by delay, while seeking cure by medicinal remedies for 10 or 12 years, to a desperate case, requiring a very difficult operation, which was followed by death from that cause. That case doesn't stand alone. But the only point I wish to make in rising is, the statement should not go out from this Society as one unimpeached, that medicinal treatment is the correct treatment for gall-stones. I think it is the wrong treatment for gall-stones. I do not say the large majority of cases need treatment, but certain symptoms may develop in which operation is imperative.

(To be continued.)

The Times and Register.

A Weekly Journal of Medicine and Surgery.

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PHILADELPHIA, NOVEMBER 9, 1895.

THE REORGANIZATION OF THE CITY HOSPITAL OF NEW YORK.

Not long since we called the attention of our readers to the gross outrage which was imposed on the Harlem Hospital medical staff whereby a whole Medical Board, without any other excuse or pretext, than reform, was "reorganized" out of existence; or rather turned over to the faculties of three medical colleges for renomination and reinstatement. It was further shown that these medical corporations, true to their instincts, but false to their professional obligations, betrayed that trust, and disregarding their duty to their profession, in making such renominations, entrely ignored the ethical questions involved, and were influenced in making nominations entirely by motives of selfish policy and nominated no one except those connected with their schools as teachers.

Encouraged by the general apathy and indifference of the profession, the commissioners—who have the appointing power—have here ordered the displacement of all the medical staffs in all the hospitals under their charge in that city, to go into effect November 1, with a reorganization on the same plan as applied to Harlem Hospital. But let us hear the clarion tones of Dr. Shrady, in his fierce denunciation of this unholy alliance of the colleges, against the profession in this matter of hospital reorganization in the Medical Record, October 26, 1895:

"Now, with an ostensible awakening to the necessities of the reforms, so long delayed and so urgently requested by the different medical attendants, it has been decided by the Commissions to make a clean sweep along the whole line, declare all places vacant, and model the patronage of all the hospitals on the Bellevue plan. This gives the three colleges three-fourths of the patronage of appointments to all these hospitals, and the profession at large but one-fourth.

"In the matter of equitable representation of interests it is not difficult to estimate the justice of the so-called reform. If we mistake not, the voice of the profession of this city will yet be heard in no uncertain sound of earnest protest against the position taken by the Commissioners. While willing to accept the situation for Bellevue proper, there is no good reason, even on the score of better or more available clinical teaching, for expanding such a policy to the other hospitals. The Commissioners may yet learn to their sorrow that the large majority of competent medical men not connected with the colleges

have some rights for proper representation, which may yet command respect when the department itself is reorganized and new appointments in its own Board are to be made.

"This entirely unnecessary, unjust, and discourteous removal of medical men from positions they have so acceptably filled involves a great deal more than the question of the outs against the ins. It is an arrogant assumption of partiality by the Commissioners that deserves a becoming rebuke. Every medical man who is not directly connected with a college consistently asks why so much favor is shown such institutions, and so little to the profession at large. Are the colleges themselves altogether innocent in the matter?"

New York city is on the eve of another important election. During the past year every unbiased elector must concede that many necessary and substantial reforms have been put into effect, and the way was open for greater advances in this direction. Physicians are not politicians, but they are staunch believers in honest civil service reform and the retention in the city's employ of all those public servants who have performed efficient service, not only the civilians but those serving in professional capacities as well, and never in the city's history was our profession more generally moved to aggressive action in a political campaign than in the one of last year. But this unAmerican centralization of power in these medical corporations, known as medical colleges, this move to turn out capable physicians in this wholesale manner and ignore the profession at large, will help to turn this conservative and effective force on the other side and bring us back to where we were a year ago; for Tammany in her palmiest days always maintained a wholesome fear of professional opposition.

As the Medical Record insinuates the medical colleges are not innocent lambs in this matter.

But the issue is now made, and we will see if in the face of the united protest of the profession the Commissioners will venture a renewal of the tactics employed last July. The claim is a monstrous and preposterous one, that the medical colleges in any sense represent all the intellect and genius of our profession. Nay! Now we repudiate and deny their pretenses to have delegated to them any authority or right to speak for the profession at large. The general profession asks and demands only its legitimate share of hospital appointments, and nothing less.

Obituary.

PROF. JAMES E. GARRETSON, A. M., M. D.

A shock to the medical and dental profession of Philadelphia was the death of the eminent oral surgeon, Professor J. E. Garretson, which occurred Saturday, October 26, from enteritis. Although this was the active cause of death, it has been evident to his immediate acquaintances that Dr. Garretson was breaking down under the strain of worry caused by the existing feeling manifested between the Philadelphia Dental College, of which he was one of the founders, and the Medico-Chirurgical College, in which he was deeply interested, the two institutions having been united under one roof for some years past and exceedingly prosperous while harmony prevailed.

To the editor of this journal Professor Garretson was a warm personal friend, and our readers have many times been treated to extracts from his pen.

Dr. Garretson's reputation as an oral surgeon was world-renowned, his work on oral surgery being classed not only in this country but abroad as a standard text-book. He had great force of character, was profoundly philosophical in his arguments and reasoning, thoroughly versed in his professional attainments and made himself beloved wherever he went.

As a surgeon he was famous, devised several ingenious operations, notably those pertaining to oral surgery.

He was a writer of prominence on philosophical subjects, his arguments always being clear, plain and comprehensive.

The works comprising his set of

six, among which the more prominent are "Man and His World" and "Nineteenth Century Sense," give much food for thought to any careful reasoner.

Dr. Garretson as a lecturer was extremely interesting, minute in detail and practical. He did not enter into all the fads of the day, but looked beyond and based his subject matter on fundamental principles rather than imaginative reasoning.

Dr. Garretson was born in Wilmington, Del., in October, 1828. He prepared himself for the dental profession early, graduating from the Philadelphia College of Dentistry in 1857. Two years later he graduated as a doctor of medicine from the University of Pennsylvania. In 1878 he became Professor of Anatomy in the present Philadelphia Dental College, being the surgeon of the college before that time.

On the death of the dean in 1880 he was elected to that vacancy, which office he held at the time of his death. He was a member of various medical and dental societies, but took the most active interest in the Garretsonian Society, a band organized of students and others, named after Professor Garretson, for the purpose of philosophical instruction.

Dr. Garretson was ever the student's friend. He made his classes love him from the very interest he manifested for them, and his death is a serious blow to the college he loved as well as to the community in which he lived.

Died in Berlin, on September 4, Heinrich Adolf V. Bardeleben, the senior of German surgeons, aged 76 years.

He was born on March 1, 1819, in Frankfort a. Oder, studied from 1837 to 1843 in Berlin, Heidelberg, Giessen and Paris. In 1848 was appointed assistant professor of surgery in Giessen. The following year he received a call as professor of clinical surgery to the University of Greifswald, where he remained twenty years. In 1868 he took Juenken's place at the head of the great Charite Hospital in Berlin, and remained there until his death, which was caused by abcess of the kidneys.

Book Reviews.

LECTURES ON APPENDICITIS. By Robert T. Morris, M. D., New York. C. G. Putman & Sons, New York.

The author of the lectures needs no introduction to the profession, for during the past ten years he has occupied an advanced position on the question of antiseptics and the surgical treatment of appendicitis. His experience with the disease has been large and his operative results perhaps better than any other American surgeon.

He strongly advises the small incision and the avulsion of the appendix in every case, which is not encysted. But he, nevertheless, wisely points out that we must in many cases modify our technique to meet the requirements of various cases.

We certainly cannot indorse his position, however, when he insists on indiscriminately operating in every case, quite regardless of its intensity of action.

The illustrations are numerous and superb, coming from that masterhand, Mr. Henry McDonald. In these lectures Dr. Morris considers also at considerable length other surgical subjects, as solvents for gallstones, surgical diseases of the kidneys, tumors and fractures. Altogether it is a most useful and valuable contribution, brief, clear and practical; just the kind of a work for reference on the subjects which it treats for the practitioner on the general operations, and, no doubt, when its merits are appreciated will find its place in every well-stocked library.

Electro-Therapeutics.

IN CHARGE OF

DR. S. H. MONELL, New York.

CLINICAL OBSERVATIONS UPON THE EFFECTS OF INTERRUPTED CURRENTS.

At the last meeting of the British Medical Association (1895) a very

complete report was presented by Apostoli, embodying the results of his twelve years experience with long coil induction currents and of his recent investigations of the general therapeutic effect of alternative electric currents of high frequency and high tension, which are in fact only extremely refined developments of the frequency and tension (or potential), exhibited in the better known currents obtained from long coil induction apparatus of the best quality. His conclusions are simply confirmative of the experience of all practical electro-therapeutists who follow the scientific progress of this branch of medicine.

They have been repeated and confirmed time and again, and may be considered now to be fully established. The therapeutics of certain forms of electricity are so fully ascertained and proved as the therapeutics of iron, quinine or strychnine, and every intelligent physician should familiarize himself with the literature of the subject even though he makes no effort to acquire the knowledge of practice and experience. To misrepresent the real value of electro-therapy, as many do who prejudice their patients against it, is as much charlatanism and as dishonorable as it would be to pooh pooh modern surgery and belittle modern pathology. An unjust attitude towards medical electricity is unworthy of any reputable practitioner of the present day, who has any confidence whatever in any of the therapeutic agents he prescribes. He is bound to credit the professional good faith of such masters of the subject as Apostoli unless he is able to offer proof to the contrary, as no one has yet been able to do.

In regard to high frequency alternating currents (obtained from sinusoidal machines, or by a modification of the static induced current) it is affirmed that they exert a powerful action upon all living bodies subjected to their inductive influence, an action expressing itself definitely upon the vaso-motor system, although they excite neither motor nor sensory nerves when generally applied, by the d'Arsonval method. Their powerful action upon all the nutritive functions has been verified by numerous analyses of the gaseous products of respiration and by Dr. Berlioz's not less numerous analyses of the urinary excreta.

The general therapeutic applications to be deduced from their physiological effects are sustained by clinical proof. When daily treatment is given the general effects upon deranged functions are as follows:

Return of sleep, increase of strength and vital energy, restoration of cheerfulness, of power to work, improvement of appetite and digestion; in short, general progressive improvement, which often manifests itself during the first few seances before any local influence is apparent and before any change has occurred in the urinary secretions.

Local pain and trophic changes require local applications, and are but little affected by general administration of these currents.

The diseases which have derived most benefit from this therapeutic agent belong to the dietetic class—rheumatism and gout. In certain diabetic subjects the sugar has disappeared altogether from the urine, under the influence of these currents, while in others no such change has occurred, despite a manifest and constant improvement in the general condition.

The fact that diabetes has different causes may partly explain this difference in the results obtained, while further experience in the manner of application or new discoveries in regard to methods and apparatus may enable us to treat it with greater certainty.

Currents of high frequency and high potential, introduced into electro-therapeutics first in this country and lately submitted to elaborate investigation by Apostoli, Berlioz and d'Arsonval in France, greatly increase the field of action of medical electricity, for they furnish general medicine with a new and valuable means of treatment, capable of modifying, more or less profoundly, the processes of nutrition. In the "Times and Register" of September 9, 1893, I described a new method of applying

an interrupted current of static electricity, which subjected the patient to a general electrization (or positive static charge) with rapid and powerful alternations of potential. The nutritive effect is similar, while the adminstration is possible and easily accomplished by those to whom the d'Arsonval apparatus is not accessible.

The same report of Apostoli referred also to certain conclusions based upon long and thorough trial of both faradic and galvanic currents in gynecological uses. The former, rapidly interrupted and of the comparatively high tension, created by long, fine wire coils, and applied to the uterine cavity, relieves for a longer or shorter time all ovarian pain of nervous or hysterical origin, but remains powerless or nearly so in cases of ovarian pain caused by inflammatory lesion of the peri-uterine tissue or of the appendages. This current is therefore useful not only in treatment but in diagnosis, assisting to distinguish the nature of so-called ovarian neuralgia and to determine rapidly the differential diagnosis between hysterical and inflammatory ovarian pain. Where the two kinds of pain exist in the same patient we are helped to understand their nature by the fact that one is relieved and the other is not. If then the curative effect of the faradic high tension current clears up or rectifies a doubtful diagnosis, it protects us at the same time from undertaking a useless operation; or if it proves ineffective it points us to appropriate galvanic treatment, upon the final failure of which surgical interference may be considered.

The constant galvanic current applied to the uterine cavity in doses ranging according to the needs of the case, from mild currents up to 50 or 100 or more milliamperes, and with due regard to the individual susceptibility and tolerance, will be almost always supported with perfect comfort, and the higher intensities without febrile reaction afterward if the parts adjacent to the uterus are free from inflammation.

Simple cystic, peri-uterine tumors, which are neither inflamed nor suppurating, such as ovarian cysts and hydro-salpinx, may also show perfect tolerance of the galvanic current. This current is also sometimes perfectly tolerated by cases in which the uterus is surrounded by old inflammatory products or exudations no longer pathogenic.

There are three classes of cases which should be considered as exceptions to the preceding rule, for they bear the galvanic current more or less badly.

They are certain forms of hysteria (for which the static current is better suited), fibro-cystic tumors of the uterus and enteritis. All acute peri-uterine inflammation (of the pelvic cellular tissues, of the peritoneum and especially of the appendages) will cause the galvanic current to be badly borne when it reaches 40 or 50 milliamperes, and will cause intolerable pain and febrile reaction when carried beyond this intensity. The intolerance for the galvanic current is generally proportionate to the extent and gravity of the lesions referred to and increases with the strength of current applied, especially when it passes beyond 40 or 50 milliamperes.

Attention is to be particularly given to this question of tolerance in intra-uterine galvanic applications, for upon it hinges an important diagnostic point. First, all inflammation of the appendages, which is curable, or at least symptomatically so, without operation, will bear the treatment better and better at each application with a gradually increasing dosage, and there will be a corresponding improvement in the prominent symptoms, such as pain and hemorrhage. The intolerance observed in the beginning progressively disappears, proof that galvanism is indicated and beneficial.

Second. All grave inflammatory lesions of the appendages, and notably all suppurative processes which are incurable, even symptomatically, by galvanic treatment show a persistent and even increasing intolerance which indicates that galvanism should be discontinued.

Thus the simple study of the tolerance or intolerance of intra-uterine

galvanic applications, and especially noting if any pain or fever accurs on the evening of, or the day following treatment, enables us to make the diagnosis. It also in four or five sittings, given twice weekly, informs us of the condition of the appendages and lessens the necessity for exploratory incisions.

The same study of these so-called galvanic reactions will also inform us rapidly (in five to ten seances) of the curability of inflammatory lesions, which the current has demonstrated. Thus gynecological electro therapeutics, carefully, methodically and properly applied is a direct auxiliary to the resources of surgery, for apart from its great curative properties it serves also as a touchstone, showing in one case an operation to be unnecessary or useless, and in another that its necessity is urgent.

The conclusion is irresistible that many of the laparotomies and mutilations, at one time the popular, but often disappointing, remedy for rebellious ovarian pain and for lesions of the appendages of vague and uncertain nature, as well as for obscure neuroses, should be henceforth delayed or refused until at least all the resources of faradic sedation on the one hand and of intra-uterine galvanism on the other, have been tried. Experience has abundantly proved these currents to be innocuous if given with the usual aseptic precautions.

To the resources of Apostoli's method of galvanic treatment, we must add the immensely valuable methods of metallic electrolysis, developed by Gautier.

Surgery.

IN CHARGE OF

DR. T. H. MANLEY, New York.

SURGERY OF THE STOMACH.

BY. H. ALLINGHAM.

The above author gives in epitome the results of a series of operations lately performed on the stomach and all of unusual value, because failures as well as successes are recorded.

Obs. I. Gastrostomy.—A man, 52 years old, suffered one year from dysphagia, but for a month everything ceased to pass the gullet. He steadily failed in flesh and had vomitings of blood. Gastrostomy, with fixation of the wall of stomach in wound. Death ten days after operation. On autopsy no peritonitis was found.

Obs. 11. Loretta's Operation.—Man, 54, entered hospital with classic symptoms of pyloric obstruction. On operation, cicatricial contraction of pylorus found. Anterior incision made through tumor, and divulsion with finger and instrumentation and stenosis entirely liberated. Peritoneal wall of stomach closed with suture. Patient sank next day. On autopsy no peritonitis, but cancer was found extending through omentum to liver.

Obs. III. Gastrostomy.—Man, 48 years old, a sufferer for four months from gastric pain and dysphagia. Unable to swallow food. Great emaciation. Gastrostomy en deux temps. Patient survived operation eleven months.

Obs. IV. Gastrostomy.—A female for two months unable to swallow food, either solid or liquid. There was a cancerous mass just above the sternum. Gastrostomy en deux temps. Patient survived ten months.

Obs. V. Gastro-enterostomy.—Patient entered hospital for treatment of stomach ache, vomiting and burning sensation in epigastrium. These symptoms lasted about six months. A tumor was found in the epigastrium. On operation cherry stones were found to engage the pylorus. A gastro-jugenostomy was made with the Senn plate and Lambert suture. Patient recovered from operation and survived for months.

Obs. VI. Gastrostomy.—Patient, a man, 66 years old, subject to dysphagia. A neoplasm occupied upper part of esophagus. The stomach was exposed and locked to opening in abdominal wall by the method of Bowerman-Jussett. Patient was alive eight months after operation.

Obs. XII.—Man, 41 years old. Progressive dysphagia rendered deglutition impossible. A gastro-enterosto-

my led to considerable amelioration.

Obs. VIII. Gastro-enterostomy.—Patient, a female, for many months subject to dysphagia and hematemesis. Diagnosis: Cancerous constriction on line with cricoid cartilage. At first an attempt was made to dislodge this, but it failed, when a gastro-enterostomy was performed. Death two months later.

Obs. IX. Pyloroplasty.—Patient entered hospital with symptoms of pyloric obstruction. There was no tumor of stomach, but it was much dilated. Pyloroplastic operation was done and patient recovered.

Obs. X. Gastro-enterostomy.—Patient, 44 years old, troubled with increasing dysphagia, which now had quite suppressed deglutition. A tumor in epigastric region found. A large sarcomatous mass was found. A gastro-enterostomy was performed and rapid recovery followed.

Obs. XI. Gastro-enterostomy.—Patient, a female, 26 years old, subject for six months of epigastric pains and bloody vomiting, with signs of obstruction. A tumor was made out in umbilical region. Gastro-enterostomy was performed, which patient survived one month.

Obs. XII. Gastro-enterostomy With Murphy's Button.—Patient, a man, 44, for four years had vomiting after meals, with other signs of obstruction. His general condition was bad. A gastro-enterostomy was done with Murphy's button. Death on third day. No peritonitis was found, and the button was pervious, well in place.—London Lancet, 1895, t, I, p. 1238.

POST-OPERATIVE INTESTINAL OCCLUSION AFTER LAPAROTOMY.

BY M. LEGNEU, PARIS.

The author cites four cases of post-operative occlusion of intestines after various operations.

In the first, symptoms of obstruction appeared three days after a simple ovariotomy. The impediment was found to be at the left angle of the colon, and was caused by a bridle of tissue compressing the bowel. Death followed.

In another, an operation for the radical case of hernia was performed. An artificial anus was made, but no relief came, and death followed.

On autopsy no cause of obstruction was found; there was no peritonitis. It evidently was a case of occlusion by paresis of the intestine, without mechanical obstruction.

In the third, obstruction followed operation for pelvic abscess. Purgatives made no impression, but by repeated emetics the bowel opened.

In the fourth case, obstruction followed hysterectomy. By removing the large vaginal tamponade relief came and the colon emptied itself.—Le Mercredi Med., Oct. 12, '95.

Correspondence.

CHARLES DICKENS.

October 7, 1895.

To the Editor of the "Times and Register:

There is a little reminiscence of Charles Dickens which is not in any way professional, but yet may be of interest to your readers. Later on I propose to show that he had a quite exceptional knowledge of medicine.

Some thirty years ago I was at Brighton, a seaport on the English coast, and I stayed at a hotel called Harrison's, kept by a gentleman named Royston, and his wife, both literary people.

I was talking to Mr. Royston one morning about novelists, and of course Charles Dickens' name cropped up. I happened to remark that Dickens never depicted a gentleman or lady in the proper acceptation of the term, but always people of the lower stratum. He appeared interested, and said he would like to introduce me to a Mr. Sylvester, a literary gentleman, who was at that moment taking breakfast in the coffee-room. I went with him, was introduced and volunteered to repeat my opinion of Dickens' shortcomings. He listened to me attentively, and said that he thought I had struck a weak chord in the novelist's writing, and asked me to meet him later in the day, to discuss the matter over again. To my dismay, he rose and left me, leaving in my hands his card,

"Charles Dickens." I had no opportunity to see him again, as I had to return unexpectedly to London; but I will not easily forget my interview with "Mr. Sylvester."

LOUIS LEWIS, M. D.

Miscellany

PHILADELPHIA ACADEMY OF SURGERY.

THE SAMUEL D. GROSS PRIZE.

The Second Quinquennial Prize of One Thousand Dollars Under the Will of the Late Samuel D. Gross, M. D., Will be Awarded January 1, 1900.

The conditions annexed by the testator are that the prize "shall be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty printed pages, octavo, in length, illustrative of some subject in surgical pathology or surgical practice, founded upon original investigations, the candidates for the prize to be American citizens.

It is expressly stipulated that the successful competitor, who receives the prize, shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross Library of the Philadelphia Academy of Surgery.

The essays, which must be written by a single author in the English language, should be sent to Dr. J. Ewing Mears, 1429 Walnut street, Philadelphia, before January 1, 1900.

Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The committee reserves the right to make no award if the essays submitted are not considered worthy of the prize.

AN ANTIDOTE FOR POISON IVY.

An anonymous correspondent of the New York Sun writes that an antidote for ivy poison is the plant called by some people "ceroline," by others the "silver plant." It grows by the side of brooks, about two feet high; the stalks are green and bear a yellow blossom, with a red tinge, shaped like the lady's slipper. The test of the plant is to place a leaf under water, when it assumes a silvery look. The stalks can be crushed and the juice rubbed upon the poison surface and immediately relief will follow, or tea can be made from it with which the surface can be bathed. He has used this for years in a family particularly sensitive to this poison, and has given it to many cases, and it never fails.

The plant referred to is the Impatiens fulva, a species most common in wet grounds in the South. It has small, orange, spotted flowers, and is best known under such names as "touch-me-not," "jewel weed," or "balsam," or "silver leaf." The name of the genus is derived from the sudden bursting of the seed pods when touched or slightly pressed with the hands. As the pods ripen they burst, scattering the seeds to a considerable distance. Our common garden balsam, I. balsamini, is a closely related species, and the seed pods are equally sensitive to the touch.—Am. Druggist.

RUPTURE OF THORACIC ANEURISMS.

Draper (Boston Medical and Surgical Journal, March 14, 1895) records notes of ten cases of sudden death due to ruptured thoracic aneurism, which, during life, had not been suspected. Of the patients, three were women, the youngest 37 years of age, the eldest 65 years. The seven men ranged in age from 30 to 77 years. The aneurisms were mostly small, and occupied various sites along the

arch and descending portion of the aorta. In three cases the vertebra were eroded. The following points are worthy of mention:

(1) The rupture of an aneurism of the aorta, although it sometimes has physical exertion as its exciting cause, does not of necessity require such cause.

(2) The pericardium more often than other cavities receives the escaping blood, and in these cases it is not the amount of the hemorrhage which kills but the inhibition of the heart-action, by compression of the cardiac walls in a sac filled to distention with blood.

(3) Deaths by aneurismal rupture, although deserving the description "sudden," are not instantaneous. An appreciable interval and sometimes a very considerable period elapses between the attack and its termination.

(4) A death by aneurismal rupture is not generally a painful one, although it may leave evidences that it is so in some cases.

(5) The escaping blood in an aneurismal rupture does not always follow the line of least resistance, and sometimes it makes a devious dissection to reach an outlet.

(6) Its small size and fusiform shape do not give an aneurism immunity from sudden rupture.

(7) An aortic aneurism is not necessarily an affair of advanced life.

PENSIONS TO MEDICAL MEN.

In a recent speech by Mr. Balfour at a dinner given by the Royal Medical Benevolent College, many things in praise of medicine and medical men were uttered. Mr. Balfour kindly sets the seal of his approval upon us, for which we are duly grateful. He recognizes the great amount of time and skill which is expended by physicians gratuitously, and he has a further and practical suggestion to make in connection with it. He suggests that there should be established by the subscriptions of philanthropists or perhaps with the help of the municipalities, funds by which the widows and orphans, and even the old age, of medical men may be provided for. We thank Mr. Balfour for his suggestion, but we do not believe that in this country it would be taken kindly. Medical men do not wish to be treated as persons who have not sufficient foresight or ability to take care of themselves. They do not belong to the indigent class, and aside from this feeling of independence which medical men, in this country at least, possess, we believe that they are as a body opposed to the socialistic tendencies which the attempt to pension the professional class would lead to. We do not know of anything which would take away the stimulus for effort more certainly than the feeling that, whatever happens, whether one be idle or industrious, evil or virtuous, there will be a provision for himself and his family.—Medical Record.

HOW WE INTEND TO CHECK SUBSTITUTION OF DRUGS.

Owing to the fact that substitution of drugs is practiced to a great extent, we earnestly request our readers to assist us in reporting to us all cases in which they may have been the victims of this criminal offense, giving the name and address of impostors, also all particulars to substantiate their statement, such as sworn affidavit, etc.

We will expose in our columns the names of fraudulent dealers on receipt of satisfactory evidence.

All our readers will admit that a doctor who prescribes a certain remedy expects that his prescription shall be filled accordingly. A druggist has no right whatever to use his own judgment in the matter, otherwise he places the reputation of the physician as well as the life of his patient in jeopardy.

Feeling that all doctors, honest druggists, and manufacturers of legitimate preparations will be benefited by our action in this matter, we solicit their assistance.

The above notice must be considered as a warning to druggists who believe that they are at liberty to substitute drugs.

ROYAL COLLEGE OF SURGEONS OF ENGLAND
28 NOV 95

The Times and Register.

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Original.

A NOVEL METHOD OF OPERATING FOR MAJOR OPERATIONS WITHIN THE NASAL CAVITIES.*

BY CARL SEILER, M. D.

* Read before the Philadelphia County Medical Society, Sept. 25, 1895.

For a number of years past, in fact ever since the introduction of cocaine as a local anesthetic in intranasal surgery, I have avoided as much as possible the employment of general anesthesia as cumbersome and unpleasant to both the patient and the operator; and in the majority of cases requiring but slight surgical interference and the performance of the minor operations, such as galvano-cautery, removal of polypi or ecchondroses, extirpation of the pharyngeal tonsil, and even straightening of the nasal septum, cocaine properly applied for a sufficient length of time before the operation I have found to answer all purposes. This local anesthesia has the inestimable advantage in these by no means simple or easily performed operations of securing for the operator the co-operation of the patient by not rendering him unconscious; the patient, thus being enabled to remain in the upright position, the usual one for examination, throughout the operation, can dispose easily and without inconvenience to the operator of any flow of blood, so that the operation need not be interrupted by any slight hemorrhage; and, what is of even greater importance, the topographical position of the parts in relation to the body of the patient, to the operator, and to the source of illumination remain the same as in ordinary examination of the nasal cavities, the knowledge of which relative positions, by long practice, has become, so to speak, automatic on the part of the operator, so that they are not consciously thought of by him during the operative manipulations if unaltered.

In those cases, however, in which the major operations within the nasal and oral cavities, such as the removal of fibroid polypi in the postnasal or naso-pharyngeal cavity, of sarcomatous tumors, or of benign tumors invading the adjacent cavities, of necrosed bone in the posterior-nasal chambers, the extractions of large rhinoliths or impacted and incrusted foreign bodies, etc., are necessary, cocaine or any other purely local anesthetic is not applicable, because the site of operation cannot be reached with the cocaine solution, and because the extent of surface to be anesthetized is either too extensive or altogether unknown to the operator before the operation, and general anesthesia must of necessity be resorted to in order to keep the patient submissive and quiet, besides rendering the surgical procedure painless; under these circumstances it becomes necessary to place the patient in a recumbent position, which at once puts the operator at a disadvantage, because it in the first place

alters the topographical relation of the parts to the operator, puts adequate illumination of the nasal cavities out of the question altogether or makes it extremely difficult, and, what constitutes the greatest objection, allows the blood to flow into the larynx and pharynx unperceived by the operator, and in such quantities as to endanger the life of the patient by suffocation if he is placed in the usual position—either on his back or on his side. This latter difficulty is usually obviated by plugging the post-nasal cavity, prior to the administration of the general anesthetic, if the operation is to be undertaken in either of the anterior nasal chambers, or by a preliminary tracheotomy and plugging of the superior laryngeal cavity, if the naso-pharyngeal cavity has to be invaded during the operation, thus making it much more tedious and inconvenient to both operator and patient in the first instance, and in the second increasing the risk to life to a very great extent.

For a number of years past I have adopted a method which obviates the difficulty of blood running in the larynx and pharynx, and so does away with the necessity of preliminary tracheotomy or plugging of the posterior nares, and which has proved so efficient in a large number of instances that I feel justified in making public mention of it now that it has been thoroughly tested.

This method is very simple, and consists in placing the patient, after thorough anesthesia, upon the operating table, in a ventral recumbent position, with the head projecting, face downward, over the edge of the table.

The head is supported in a horizontal position by the hand of an assistant, and by placing a bandage around the forehead, the loose ends of which are secured to a band around the waist of the patient, as better still to a rigid support above the head of the table. In this position the flow of blood occasioned by the operation finds vent through the nostrils and mouth, and none of it finds its way into the larynx.

Of course, the topographical relation of the parts to the position of the patient is an entirely different one from that we are accustomed to in the ordinary upright position, but not much more so than when the patient is in the prone dorsal as lateral position, and with a little practice on the part of the operator this difficulty is soon overcome.

In order to obtain sufficient illumination an ordinary looking-glass or a concave reflector is placed upon the floor beneath the patient and secured in such a position that it will reflect light from any convenient source, a window or gas jet, into the nasal cavities. As a rule, in such operations I depend upon the sense of touch rather than upon that of sight, but if it becomes absolutely necessary to see any particular portion of the nasal chambers, which can be seen during the operation, I adopt the very simple expedient of lying upon my back under the table, which brings me again into the same relation to the patient's nasal cavities that I was in when he was sitting conscious on the examining-chair, and thus the topographical relations are restored, under somewhat inconvenient circumstances it is true, to the normal and accustomed one.

I have performed of these major intra-nasal operations with the patient in the position described, and have been greatly pleased with not only the freedom of motion which it gives to the operator for his manipulations, but also with the ease of mind and freedom from anxiety, lest blood should choke the patient in spite of all precautions to prevent such an accident, which have to be instituted in the old method of the dorsal recumbent position, even with the head extending beyond the edge of the table and hanging down.

A PRACTICAL STUDY OF THE BLOOD AND THE CIRCULATION, WITH A HISTORICAL REVIEW OF THE SUBJECT AND ITS BRIEF CONSIDERATION FROM THE STANDPOINT OF ITS CHEMICAL COMPOSITION, ANATOMICAL STRUC-

TURE, AND PHYSIOLOGY; INCLUDING CLINICAL STUDIES, AND EXPERIMENTAL RESEARCH ON THE LOWER ANIMAL.

BY THOMAS H. MANLEY, M. D., NEW YORK.

Continued from last number.

PART IX.

ON THE CAPILLARIES AND THE BLOOD CORPUSCLES.

Medicine in the nineteenth century has made stupendous strides in the direction of experimental research, and by utilizing those discoveries and inventions which enable us to investigate living phenomena. Lavoisier, the famous French chemist guillotined in 1791, had placed by his stupendous labors before his tragic end the science of chemistry on an enduring basis, making its study available in analyzing living phenomena, in determining the changes occurring in the fluids and solids in the body in health, and in enabling us to administer remedies on a scientific basis. This epoch marked the beginning of the end of empiricism.

By the application of the physics of acoustics, the study of sounds and movements, Laennec opened the way to a ready and accurate recognition of many pulmonary and cardiac disturbances and lesions. The modern microscope enabled Virchow to lay the solid groundwork of modern cellular pathology. Without this instrument his efforts would have been futile; and, without those staining fluids of such intensity in action, as the aniline dyes, but lately elaborated, Koch could not have discovered the bacterium of tuberculosis, nor would we now have that vast field of bacteriological science open to us. The experiments and researches of the late Louis Pasteur, the chemist, have quite totally annihilated those views of pathology which, until his time, were taught with all the force of dogma. His remarkable brochure on fermentation contained the germ of antisepsis, through which Sir Joseph Lister was inspired, when he commenced that brilliant series of experiments so soon not only to revolutionize the domain of surgery, and carry the most radical reforms into medicine, but even to threaten the existence of polypharmacy.

It was regarded a great gain when chemistry enabled us to recognize certain diseases of the kidneys and forecast events in their course by its aid through examination of the urine. This was the only excretion which chemistry, with any degree of accuracy enabled us to examine. But now we know that chemistry, as a sole reliance in urinary analysis, is not to be depended on, and is practically pushed aside by the microscope, which discloses the most remarkable and extraordinary revelations in urinary examination, not only pointing with unerring certainty to morbid tissue changes in the kidney, but also casting a flood of light on the state of the mucous passages from the urethra upward.

Now, all the secretions may be studied with advantage and precision, and no doubt in the near future the incessant and laborious efforts of the immense army of investigators in the field will far advance this branch of biological science, and show that to the microscope we must look for definite knowledge in the many problems which confront us in the prognosis and treatment of disease.

But we have made a step further and extended our investigations into the very citadel of life itself.

The dead blood and the living blood, that in a state of decomposition and that in motion, with all the characteristics of life, has finally come under the observation of the investigator; not the fluid en masse so much as its finer elements. Here Norris, Heymen, Hoyer, Eberth, Strickler, Laveran and others have broken new ground for others to cultivate, and no doubt in the near future we may expect to find medical literature enriched by a wealth of material from this source.

Hematology is one of the fundamental studies of pathology. This is a vast one, with room for all to work. Hayem, in the preface to his imposing volume, complains that others

have been appropriating his work; and Norris, too, charges Bizzozoro with a similar fault; but the probabilities are that very much which each of these authors claim as their exclusive property was well known before their time, and, after all, no plagiary was committed. We give Lister the sole credit for discovering antiseptics; but, in Hunter's work on the blood and its changes under inflammation, he says he "used local treatment of the parts, stimulating such antiseptic medicines, as turpentine, the balsams and essential oils." He also speaks of the special characters of these pus-corpuscles coming from one of a vigorous constitution; while we find a modern distinguished author claim the discovery as his own. (Dr. Carl Heitzman, A System of Pathology, p. 217.)

It is, therefore, evident that while much of what is being done in hematology is essentially original, not a little of it includes the views of former writers, presented in a new dress.

In my own limited work my path has been lighted from many sources, mostly from physiological writers, for it is only of late that the subject of corpuscular elements of the blood have been studied from their practical bearing on disease.

My aim at the outset was with the view of studying the effects of fracture on the movement of the blood current; but the marvelous phenomena which opened up to me after the blood tide was fully under my view, were so pregnant with suggestions that I decided to extend it to other traumatic and pathologic states.

After patient and repeated examinations of the field of the living corpuscles, it appeared to me that in order to rationally grasp the subject of hematology and derive the greatest profit from its study, it would be necessary to deal with it seriatim in the normal state, observing, first, the arterial terminals, next the capillaries, and, lastly, the venous rootlets; then finally put a brake on the afferent vessels, slacken the current and study the corpuscles.

And, it may be said here, that under the general head of capillaries, reduced to three divisions, all the finer vessels will be grouped.

First, the arterial capillaries; second, the terminal capillaries, and finally the venous capillaries.

The word "capillary" in this instance is an important one. It is derived from the latin word capillus, a hair; but the finest hair is very much thicker than a terminal capillary, and, moreover, the vessel bears no resemblance to a hair in any particular. The capillary system is a reticulum, which, when carrying blood globules, is apparent to the eye, but when suddenly emptied vanishes from view.

We can only recognize it clearly in the living organism; for, after death, or after a tissue is removed from the body, it has quite disappeared. Anything like a perfect injection of it, with a staining fluid, which will enable us to issolate it distinctly under the microscope is quite impossible.

Riolanus, the famous French anatomist and contemporary of Harvey, taught that the arterial and venous currents were continuous through an intermediate set of vessels, while Harvey himself, who had been the first to describe the mechanism of the circulation, denied this, believing that the arteries discharged the blood directly into the tissues, from which it was taken up by the venous rootlets. Neither one was able to convince the other by an ocular demonstration, because the means of making this were absent.

The minute capillary tracts are said to be made up of endothelial corpuscles, or are protoplasmic tubes. They evidently are flat in form and are formed by continuous rows of long, tapering spindles, so exceedingly delicate as to permit of their fluid contents to pass out and other elements to enter.

The vitalized substances of which they are formed, however, possess great tensive resistance, else the blood corpuscles, as they rush onward, must burst through the walls. The force of the arterial impulse, however, is here broken, and the corpuscles now, though speeding on, are comparatively uniform in their movement. The average diameter of a human red corpuscle is one three-thousandths of an inch, and some of

the finer corpuscles will not permit more than two or three abreast to move through them. This would indicate that the diameter of a corpuscle is exceedingly narrow. It is probable that there are other fine channels in the tissues for the colorless juices which escape detection, as they are without power of refracting light, something similar to the intercorpuscular tracts of the corneal corpuscles. Because we have not seen them is no good reason that they do not exist. Physiologists speak of canaliculi. May not the capillaries possess, unseen as yet, analogous strictures?

(To be continued.)

Society Reports.

CINCINNATI OBSTETRICAL SOCIETY, JUNE, 1895.

(Continued from Last Number.)

DISCUSSION OF DR. JOHNSTON'S PAPER.

Dr. E. W. Mitchell:

Mr. President:—The general practitioner will see a dozen recoveries with medicinal treatment to one needing operation; while the specialist will see cases from rather a different standpoint. So it seems to me it is well to compare notes. It is a great mistake to make operation a durnier resort because the prognosis is extremely grave when the patient is in extreme cholemia; the blood change is so pronounced that the patient will die often in spite of the relief of the obstruction. Because of the amount of change in the blood the patient cannot rally. And so we want to sort of balance the two extremes. And I think Dr. Hall has pretty well defined the cases which need operation. Certainly it is a mistake to let a case go on month after month, or year after year. But some cases will carry a gall stone, too large to cause obstruction, many years, and may carry it to their death without any bad results. Often we find gall stones on autopsy which have caused no trouble during life. I have here some specimens. These fragments represent two mulberry calculi. You can see by putting them together they would make two very large stones. They were removed from a lady 62 years of age. The patient had symptoms of gall stone several months before coming here, and was, while here, extremely prostrated for awhile, having several attacks. She had some hectic symptoms, indicating some suppuration. As soon as the patient could be put in good condition for operation she went to Christ Hospital as a private patient, and I removed these stones. The gall bladder was firmly adherent to the anterior abdominal wall. It was a little difficult to grasp the stones and remove them. One was fitted into the neck of the gall bladder. The patient made an uninterrupted recovery. The fistula healed before she left my care. But I have recently had a letter from her stating she is suffering again from similar symptoms. So possibly she has a return of calculi; or it may be she is now developing malignant disease. It was impossible at that time, of course, to examine the liver or the ducts by the finger externally, as the gall bladder was adherent all around. There is probably another stone. One of my friends who saw the case just prior to the operation was impressed that it was a case of malignant disease and not of gall stone.

These specimens were from a patient about 65 years of age. In the first case the diagnosis was quite easy, but in this case the diagnosis was obscure. The patient had a cancer of the mammary gland (carcinoma) removed. She made a prompt recovery and had no evidence whatever of return, no enlargement of the auxiliary glands. Her health was good up to four or five months prior to the operation. For four or five months she complained of rheumatic pains, suffered a good deal from lumbago without any definite symptoms, but never complained of any pain in

the epigastrium nor in the region of the gall bladder. She had a fair appetite and digestion, but was not so well as usually. A few weeks before the operation she was somewhat jaundiced, but there was no pain or tenderness over the region of the gall bladder or the epigastrium. Of course the first suspicion would be that there was a malignant disease developing in the liver. This jaundice very gradually increased with the progressive loss of strength and failure of appetite, until finally she took to her bed. I could then make out a little enlargement. I thought of the gall bladder, and asked Dr. Reamy to see the case with me. He was inclined to think there was a possible obstruction of the gall ducts; yet there was a possibility of cancer and of catarrhal jaundice. The question of operation was talked over at our first meeting, but was not proposed to the family until several days afterward; and it was proposed then, since the patient was progressively losing flesh, that an exploratory incision should be made. It was perhaps a week or two before we could obtain the consent of the friends to this, especially since we felt it our duty to state plainly to them that it was possibly a case of malignant disease and an operation would not benefit her. They finally consented to an operation. This case, I think, is a good illustration of the mistake of delay. During the days we were waiting to get the consent of the friends the jaundice increased considerably. The urine was full of bile, and the stools were clay colored. Upon operation we removed these stones. One of them was pushed back from the upper end of the common duct without any great difficulty. The patient rallied well from the operation, and did well as far as the operation was concerned, but after some two weeks died from exhaustion and probably from the condition of cholemia. The case, I think, is worthy of reporting in this connection because it illustrates the mistake of putting off the operation so long. I believe if the patient had been operated upon as soon as jaundice developed her life might have been prolonged. After death we were allowed only to make such examination as we could through the incision. There had been, after the operation, decided darkening of the stools, showing some, perhaps considerable, bile got through into the intestinal canal. The liver was but slightly enlarged and there was no evidence, so far as we could determine by palpation, of any malignant disease whatever in the liver.

Dr. Palmer said: The remarks of the last speaker have induced me to speak on this subject. I have never had a case under care requiring any surgical interference. That it is required at times all must admit, but all surgical interference ought to be considered only after failures with medicinal agents, or only in very bad cases seen quite late. Many, if not most, patients seen at all early in the history of the affection are entitled to a judicious use of certain medicines, as Carlsbad waters at Carlsbad springs, if they can afford it, or Carlsbad salts, obtained in this country, or the salicylate of sodium, or the phosphate of sodium.

There can be no question of the usefulness of Carlsbad in biliary calculi. Salicylate and phosphate of sodium have served me useful purposes. I am disposed to think that they rank much in the order named.

All cases, unless very bad, so bad as to demand prompt surgical procedures, may be, probably will be, benefited by these remedies, and in their use months may be profitably consumed.

Dr. Johnston asks how these remedies act. Probably by increasing the quantity, and altering the quality of the biliary secretion, dissolving the biliary calculi.

Dr. Reed:

Mr. President:—I think I am acquainted with the case referred to by Dr. Zinke. The case is one I was called to quite unexpectedly, and without any knowledge that the doctor had been previously connected with it I made a diagnosis of recurrent appendicitis. The pain was located in the right iliac region. The patient entered my hospital for the

purpose of going through an operation. For a while she remained to overcome a chronic constipation. She developed then signs that caused me to say we would probably find gall stones. So I simply made the incision a little further to the side and extended it up with a little increase in the obliquity, and removed an adherent and catarrhal appendix from the lower end of it, and removed a biliary calculus from the upper end of it, and she got well.

Just one other point. And I am glad that case was referred to because it brings us to another point. I must, Mr. Chairman, raise a protest against the undue continuance of medical treatment in obvious cases of gall stones. I do not believe all cases should be operated upon; but, sir, I have never had a fatality that mars my record, but it occurred from complications that developed during the prevalence of medicinal treatment. So while I concur that in a few cases we should give them some chance of recovery without operation, yet we should not let them run through months, because fatal cholemia may develop in a week. Such cases should not wait a long time, because you may then have an occlusion of the ducts; but on the standing of the sclerotic, particularly in the presence of a persistent tenderness in the hepatic region, operate.

Dr. A. W. Johnston:

Gentlemen:—I have always said no man is fit to be a surgeon until he is a good practitioner, and knows all a practitioner should know. There are two complicating diseases I have run across in my operative work, tuberculosis of the gall bladder and peri-hepatitis, both of which very closely simulate gall stone, and for which I have operated. A very large gall bladder, filled with purulent material and containing only one or two little stones, was stitched to the skin, and the patient made a nice recovery. In a year the man was dead, with all the symptoms of tuberculosis. On post-mortem examination I found masses of "chees" in the liver. The sinus had never closed and was sewed with tubercle from one end to the other. Another case was one which a good physician, in fact, sent to me to do a chole-cystotomy on last spring. I opened the abdomen fully expecting to find gall stone, but the gall bladder was about the only healthy thing in there. It was absolutely free and not distended. The woman had attack after attack of fever, and the only way I could account for it was that through dense masses of adhesions I felt the head of the pancreas, which seemed somewhat enlarged. I knew I could do nothing with it and left it alone. There was nothing but a peri-hepatitis, which runs its regular course, and whenever she went out and got a cold she would have an attack. Now there are other things, Mr. Chairman. I have had no less than two cases in the last few months diagnosed as gall stones which turned out to be cases of inter-menstrual pain. I found, by watching the time of the pain, it occurred at the close of the ninth and beginning of the tenth day. I watched it three or four months. It was an inter-menstrual pain which was mistaken for gall stone colic. The patient was a young woman who had paid little attention to herself. Another young woman was sent to me to do a chole-cystotomy on, but she did not give a good history for it. The attacks came on after the birth of her child, and she had had no such thing before her marriage. The pain was located about the end of the eleventh rib. She was sent to me from the Pacific coast, and I kept her for several weeks, hoping she would have one of these attacks, but would not come on. She had a decided metritis and the appendages were somewhat damaged, but not enough to justify their removal. I finally sent her to her relatives in the city and watched her for three or four months. I let her in the meantime go to New York, hoping to bring on an attack, but no attack occurred. Then her child had convulsions and came near dying, and soon afterwards she had an attack. When I arrived she said "I have that lump at last and I want to show it to you." I found an absolutely tympanitic mass of the colon.

She had damaged appendages, and

I found the attacks always came on, when I quizzed her closely, like an inter-menstrual pain.

Now, Mr. President, there is another point I wish to speak about. First and foremost, we must remember we are physicians, and make our diagnoses as quickly as possible. But Dr. Reed and Dr. Hall are right. Don't let the patient run down. We have the one little common-sense rule: When it is more dangerous to let the case run than to make an exploratory incesion, which I believe is one-third of one per cent., make the exploratory incision. This often seems to be just what is needed to start the case off right. It gave me the cue to the case I have just mentioned. I would always lean to the exploratory incision, and I think it is less dangerous to make an exploratory incision than to let a patient go on, jaundiced, week after week.

Now to come to gall stones themselves. I am glad Dr. Mitchell has brought these specimens to-night. The last one is nothing but inspissated bile. They are little fellows. One is nothing but dried bile, showing the patient had been on a spree or gotten the digestion a little upset, and the bile dried. The other, though, is a totally different thing. It is the kind that is capable of relief, if anything is, by medical treatment. And it puts us to the necessity of proving the negative when we say such treatment doesn't do any good. I have known men who had gall stone colic ten or fifteen years ago, and I have nursed them through attacks, and to-day they are perfectly comfortable. I would not think of operating upon them. The large specimen presented,which is crushed, is the same thing as the tartar on the teeth. The catarrh of the intestine simply extends up into the gall bladder, and there sets up a catarrhal cystitis, and you have the phosphatic deposit, and that I believe nothing on earth will do any good for but the knife. And if you tabulate the cases of operation, I believe you will find those are the cases which require operation. The cases of inspissated bile may slip out and do no harm.

A number of words of warning about waiting too long have been given. I will add one more. A man came to me and stated the case of his brother, who had attack after attack from gall stone, and wanted me to go down and operate upon him in the morning. I told him I would meet him at the first train in the morning. We could not go sooner. I told him, however, I thought his brother would be dead before we got there. A telegram came and turned me back with the information that he was dead. They sent me a box of stones, which had blocked the common duct. The common duct was plugged very tightly, and the other stones were driving these stones into it. We must remember that pain and cholemia are not the only things to dread in these cases.

In this, gentlemen, just like in every other disease, don't wait until you see the running down itself, but when you see the tendency is bad—and that may be measured by months or weeks or days or hours—remember a simple little exploratory incision is far safer than waiting and waiting and waiting until you have gone you hardly know where.

Dr. Johnston—While there are hundreds and thousands of persons possessors of gall-stones, who either do not present any symptoms of gall-stones or are harrassed with pain through a long period of years and die of other causes, there are a goodly number who die of biliary calculi. I know three or four patients who died from gall-stones. In one, a woman, some 50 years of age, whose trouble was diagnosed as cancer of the liver, there was found post-mortem about a pint of gall-stones. The next case, occurring in the first year of my practice, was a woman who was suddenly attacked with excruciating pain and died in a few hours. She simply died of pain in spite of the free use of morphia. The third was a patient who had suffered ten or fifteen years with gall-stones. At the time I saw her I advised an operation, and told her she might die from an attack in the following week, or live ten or fifteen years, and die of some other disease. Shortly afterward she had an attack and died.

It is sometimes very difficult to make a diagnosis, and even if you find stones passing in the stools you are never sure whether those stones are the last or not. If you should make an operation in such a case and find no stone, you would be in quite a predicament unless you inform the patient that the operation is primarily exploratory. It is somewhat difficult to tell what cases to operate upon. You must study each case that comes to you from every point. The case I reported suffered four years, and was 22 years of age. How much longer would this have gone on? Nobody knows. Would it have been right to have let her suffer every week or two from stones, when she could be relieved of a disease which might have lasted for years and years? I think in a case of that kind an operation should be done. Cases that have been icteric for only two or three weeks you can probably treat with some safety; but if they have been icteric for several years, it is almost impossible to do anything with them. Now, in diagnosing stones with the aspirating needle, you can see it would be almost impossible to strike a small gall-bladder in which there are but few stones. In the case I reported it would have been almost impossible to have struck the gall-bladder.

It seems to me if we have any remedy that will dissolve these stones in the body it ought to dissolve the stones out of the body. I have placed these stones in vials and put a great many chemicals on them and tried to dissolve them, but did not find anything that had solvent powers of any moment.

Dr. Mitchell—Did you try glycerin and olive oil?

Dr. Johnston—Yes, sir. The reason I made these experiments was to find out whether I could dissolve them, so that in case of stone in the common duct we might inject the remedy against the stone and probably dissolve it in situ instead of having to cut into the duct.

As it is impossible to dissolve these stones in the laboratory with drugs, which would not be deleterious if introduced into the human system, I think it is useless to administer drugs for their supposed solvent power on gall-stones.

Dr. Mitchell—The fact that none of these remedies may dissolve the stones out of the body, or perhaps in the duct, is not a proof the medicines will do no good. They may so modify the bile as to change the stones or force them out, and have some action aside from their soluble properties.

Dr. Reed—Is there any conclusive evidence that any remedies will dissolve such concretions?

Answer—No, sir.

Dr. Hall—Then, is not all treatment simply for the relief or palliation of the patient?

Answer—No, sir.

TENDON GRAFTING.

A New Operation for Deformities Following Infantile Paralysis, With Report of a Successful Case.

Surgeon-in-Chief of the New York Infirmary for Crippled Children; Surgeon to the Infants' and Children's Hospitals.

At the meeting of the New York State Medical Association, October 15, 1895 (Med. Rec., Oct. 26), Dr. Milliken presented a boy 11 years of age, upon whom, 20 months before, he had successfully grafted part of the extensor tendon of the great toe into the tendon of the tibialis anticus muscle, the latter having been paralyzed since the child was 18 months old.

The case which was presented showed the advantages of only taking part of the tendon of a healthy muscle, which was made to carry on the function of its paralyzed associate, without in any way interfering with its own work.

The brace, which had been worn since 2 years of age, was left off, the patient walked without a limp, the talipes valgus was entirely corrected and the boy had become quite an expert on roller skates.

Dr. Milliken predicts a great field for tendon grafting in these otherwise hopeless cases of infantile paralysis, who heretofore have been doomed to the wearing of braces all their lives.

The Times and Register.

Weekly Journal of Medicine and Surgery.

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PHILADELPHIA, NOVEMBER 16, 1895.

ACTION OF TEA ON THE DIGESTIVE ORGANS.

An interesting account is given in the Dublin Medical Journal for October of Dr. Peter M'Kechnie's experiments on the action of tea on the organs of digestion. The experiments were carried out partly in test tubes, partly in the stomach of a monkey, access to which was formed by a fistula.

The aliments experimented with consisted of egg-albumin and beef-fibre. Weighed quantities of each were used and were mixed with glycerol extract of pepsin and hydrochloric acid. To these mixtures a measured quantity of infusion of tea was added. The infusion of the tea occupied periods varying from five to twenty minutes. Six test tubes were used, a seventh being employed to test the action of the tea on meat-fibre alone. That process lasted 110 minutes before the meat-fibre was dissolved. Experiments with the tea infusion showed that the digestion of the mixture occupied 118.5 minutes. The time was not affected by difference of strength of the infusions of tea. Tea from which its tannic acid had been precipitated by means of gelatin was not more readily digested than ordinary tea.

In the case of the monkey, it was found that when the ingesta were altogether introduced through the mouth, digestion occupied five minutes longer than when the ingesta, except the tea, were introduced through the mouth and the tea by the fistulous opening into the stomach. From this it is to be inferred that the tea exerted an inhibitory influence on the salivary glands. The author is of opinion that it is not the tannic acid, but some of the more soluble constituents of tea which retard digestion.

The comparative values of different kind of teas were investigated. The Indian and Ceylon teas yielded the greater proportions of extract—i.e., made stronger infusions than the Chinese teas. Digestion took place more rapidly when the stronger infusions were used. The author believes that the larger proportion of caffein in the Ceylon and Indian teas as compared with the Chinese teas is the cause of the more easy digestion of the former, the caffein acting as a stimulant to the motor nerves, and increasing the flow of bile and stimulating peristaltic action.

Dr. M'Kechnie does not share the somewhat general belief that on the whole tea is not a wholesome beverage. I agree with this opinion. Since the general use of tea has been adopted in these countries, the state of public health has not deteriorated, but, on the contrary, has improved. Dr. E. Smith, in his work on "Health and Disease, Etc." (London: Walton

& Maberly, 1861), says of tea, that "it has both lessened the supply of nutriment and made better use of that which is supplied, and, hence, it has contributed most powerfully to the prevention of accumulations within the system, and the most perfeet discharge of effete matter."

Dr. M'Kechnie deprecates the practice of infusing tea for more than five minutes, and states that by twenty minutes infusion the tea yields a much less wholesome beverage than if it were infused for a moderate time. As the tannin of tea being very soluble soon goes into solution, it would be interesting to determine the nature of the body or bodies which are dissolved out by long-continued digestion and which have a bitter flavor.

PRECEPTS FOR CYCLISTS.

Cycling seems to be quite as popular in France as it is with us, and yet there are medical authorities amongst our neighbors who condemn the practice because, in their opinion, it is liable to be attended by cardiac or circulatory troubles. It is true that in this country similar allegations have been made; but, so far as we are aware, the charge has never been seriously maintained, and no well-authenticated cases of disease arising from the use of the cycle have been placed on record. On the whole, it may safely be said that self-propulsion on two or three wheels is about as salutary a form of out-door exercise as could well be devised, provided always that the injurious and hideous bent posture affected by "scorchers" be rigorously condemned and avoided. It must not, however, be inferred from this ability on the part of the Anglo-Saxon race to indulge in cycling, with not only impunity but benefit, that the rule is likewise applicable to the members of other nationalities. All English schoolboys are accustomed to out-door sports of a more or less violent character from their earliest youth—cricket, football, tennis and other athletic games of various kinds are as much part and parcel of the curriculum in our schools nowadays as the Latin grammar, if not more so; and thus it comes to pass that very few adults arrive at maturity with their organs and muscles uninured to intermittent extra calls, in every shape and form, upon their powers of endurance. Our rising generation enters upon life physically prepared for any emergency, and, thanks to this early training, it is that cycling may be regarded as practically harmless, even though its votaries should postpone their initiation until comparatively late in life. Now, although in Great Britain there may be no medical objections to cycling when judiciously carried out, there are certain attendant circumstances involved in the practice abroad which demand consideration. Generally speaking, it may be said that in the matter of physical exercise the system of education usually adopted on the continent is totally different from ours. Sports and pastimes are but little encouraged in foreign lycees, and such as do exist are for the most part sedentary performances scarcely deserving to be classed as trials of strength and stamina. The youths consequently grow up unfitted to withstand the severe strain of cycling, and the circulatory apparatus is naturally the first portion of their economy to give way under the unwonted exertion. The foregoing remarks were suggested by some "precepts for cyclists" that have been drawn up by M. Rocheblanc for the benefit of his fellow-countrymen. It is not likely that, so far as the male sex is concerned, the recommendations will be adopted on this side of the channel, but their reproduction may be advantageous to the ladies who have taken up cycling with such marvelous energy. Girls do not serve the same apprenticeship to rough games that boys do, and, therefore, the French physician's warnings are more pertinent to their case. 1. No one should become an habitual cyclist without medical authorization. Before committing himself to an opinion the medical man consulted will do well to examine the beginner on dismounting from the machine as well as beforehand; there are certain car-

diac defects which only become recognizable when the subject is under the influence of excitement or fatigue. 2. A cyclist should at first be content with a moderate pace, not exceeding twelve kilometres per hour (about seven miles and a half). A higher rate of speed should only be indulged in after the rider has gone through a regular course of training. If a break in the practice occurs, lasting even a few days, the cyclist should recommence at the slower rate. 3. The temptation to go quickly must be controlled as far as possible. A bicycle travels well-nigh of its own accord, and it is very hard to resist the "delirium of speed." With a light machine on a good road, and helped ever so little by the breeze, an amateur, even when only half trained, can easily achieve his twenty-five kilometres within the hour (fifteen miles and a half). This is too much, seeing that when doing from fourteen to sixteen kilometres the rider's pulse rises to 150.—London Lancet.

Book Reviews.

TWENTIETH CENTURY PRACTICE. AN INTERNATIONAL ENCYCLOPEDIA OF MODERN MEDICAL SCIENCE. BY LEADING AUTHORITIES OF EUROPE AND AMERICA. EDITED BY THOMAS L. STEDMAN, M.D., NEW YORK CITY. IN TWENTY VOLUMES. VOLUME IV. DISEASES OF THE VASCULAR SYSTEM AND THYROID GLAND. NEW YORK: WILLIAM WOOD & COMPANY. 1895.

The subjects treated of in the fourth volume of this popular work are few in number, but of very great importance to the general practitioner, as well as of interest to the pathologist. The first article, to which somewhat more than half the volume is devoted, is on Diseases of the Heart and Pericardium. The fact that this is from the pen of Dr. James T. Whittaker, of Cincinnati, is a sufficient guarantee of its excellence. Of the four hundred and fifty pages given to the article, the diseases of the pericardium take about sixty, and the diseases of the heart itself, with its lining membrane, the balance. An interesting section is that on neuroses of the heart, to which some seventy pages are devoted. The section on valvular affections also deserves special mention.

Immediately following this article comes one on "Diseases of the Blood Vessels," by Dr. A. Ernest Sansom, of London, who is well known as an authority on these affections. This paper, of about one hundred pages, is followed by one on "Diseases of the Lymphatic Vessels," by Dr. Bertrand Dawson, also of London.

The closing article, and one of special contemporaneous interest, is by Dr. George Murray, of Newcastle-on-Tyne, on "Diseases of the Thyroid Gland, including myxedema, cretinism, exophthalmic goitre, and goitre, as well as inflammation and neoplasms. The editor's selection of Dr. Murray to present the subject of myxodema is peculiarly appropriate since it is to him that we owe the introduction of the thyroid-gland treatment, which has robbed this disease and its close relative, cretinism, of their terrors. Naturally, the author goes very fully into the history and mode of application of the thyroid treatment, taking up in their order the successive steps by which this triumph of therapeutic art has been reached. This is the first time, we understand, that the subject has ever been presented in systematic form, outside of journal articles, by the originator of the method. Some of the illustrations in this article, reproduced from photographs, showing the results of treatment, are very striking. Dr. Murray has an easy and pleasant style, and his account of this wonderful discovery is ably written.

This volume, in respect both to the importance of the subjects treated and the reputation of the authors, maintains the high standard of excellence set by those which have preceded it in the series.

TRANSLATIONS FROM

Foreign Exchanges

By Drs. CHANDLER and DAVIDOW.

THE FIRST HUNDRED CASES OF DIPHTHERIA TREATED WITH SERUM, IN THE MOSCOW CHILDREN'S HOSPITAL. PROFESSOR N. FLATOW, DES, P. KUSSOW AND NEWJESHIN.

In the Medicinskoje Obosrenje, 1895, No. 13, authors report a careful study of 100 cases of diphtheria treated with serum. Nineteen cases are recorded fatal. The mortality of the previous four years was 38.9, 36.4, 40.0 and 55.9 per cent.—or an average of 47 per cent. Conservatively speaking, the epidemic this year was not wild. In the 100 cases, 35 were of a severe type, with great infiltrations in the surrounding tissues, and 25 cases with laryngeal croup. The authors are very enthusiastic over the results; not only is the duration of the disease lessened, but the mortality itself is greatly reduced. Cases which, before the institution of the serum therapy, were considered fatal, as septic cases with great infiltration and edema of the neck, were saved by its treatment. Not a single case developed croup. The 25 cases with laryngeal croup were brought as such to the hospital. On the first indication of croup, if the serum be administered, no symptoms of stenosis will result. According to the authors, this is the main action of the serum.

In light and medium cases, on the first injection, the authors noticed an arrest of exudation into the mucous membrane. In severe forms of diphtheria the exudation continues for one day and then the process remains stationary.

From exact statistics given by Newjeshin, the commencement of clearing of the throat in mild cases was usually on the sixth or seventh day, in medium cases on the eighth or ninth, and in severe forms ten to eleven days. With the application of the serum the clearing commenced, even in severe forms, on the fourth or fifth day. In commencing croup the effect was prompt, the hoarseness and hollow cough disappeared fast. When tracheotomy was necessary, with the serum therapy, the healing process in the trachea was more rapid and the cannula much earlier withdrawn. In general the tone of the body also improves. Children, who, before the first injection, would lay apathetic, immediately upon the same become active and inquired after food, failing only in severe cases. In mild and medium cases the influence on the temperature and pulse could be noticed after 24 to 48 hours, when both would fall to normal, or even subnormal. Albuminuria, in accordance with the authors, was not as often, and at a later day in the course of the disease. They have been confronted with neither injurious nor dangerous consequences by the serum treatment. The skin eruptions, as urticaria, erythema, polymorphum or scarlatiniform, would generally disappear on the eighth day of the disease. In conclusion as to diphtheritic paralysis, the serum has no influence, nor any immunity from recurrence. A. D. D.

NEW LAWS OF INTEREST TO PHYSICIANS IN RUSSIA.

Foreigners, according to the latest decree of the Imperial Medical Board, will not be allowed to present themselves for the learned degree M. D., as it was heretofore. They will first have to pass the same rigid examination for "physician" as the natives, the degree of "Bachelor of Arts" being requisite in all cases. History of Medicine is the additional compulsory branch to the carriculum. To be a candidate for the degree of "M. D.," it is necessary, for all alike, to be at least for three years physician, pass an examination in all the preliminaries, and defend an original essay on any specialty, naming as such: (1) Anatomy; (2) histology; (3) physiology; (4) pharmacology; (5) pharmacy and pharmacognosy; (6) internal medicine; (7) nervous and psychical diseases; (8) venereal and skin; (9) surgery; (10) opthalmology; (11) obstetrics and gynecology; (12) pedi-

atrics; (13) hygiene; (14) legal medicine. This essay must be presented within five years after passing the secondary preliminary examination. Failing to do so after this expired time, a new secondary examination in the preliminaries will be required.

A law is proposed in the new session of the criminal code, making liable a physician who refuses to give his professional assistance to a man unconscious, or if requested by any one, representing the government, or if the physician knew of the severity of state of a patient he refused to treat. The punishment to be three months' arrest, and the Court, at its discretion, may publish the same in the press at the expense of the convicted. A. D. D.

ON THE USE OF GOOSE FEATHERS.

The goose feather is an article which may be put to many uses by the country practitioner, who finds himself only too often at a loss for some instrument that he has unfortunately left in the third left-hand drawer of his desk; said desk being usually anywhere from six to fifteen miles distant.

That the quills may be used for making swabs, as caustic holders and for covering the points of trocars are comparatively well-known facts, but it is now proposed to indicate a much broader field of usefulness for them.

Supposing the case of a country doctor called to a patient with paralysis of the bladder, this being distended until it reaches the umblicus and catheterization urgently indicated, while the physician has unfortunately left his pocket-case at home on the pork barrel.

The goose feather is now king. An eye is quickly cut in each end of the quill and we have a catheter ready for use. As to disinfection, Wolf says in his article in the "Zeitschrift fur aerztliche Landpraxis," that asepsis and not antisepsis is the order of the day, and that if a comparison as to cleanliness be made between a new feather and an old catheter, the chances would be largely in favor of the quill. Will one, however, not be willing to take any chances, then the quill should be thoroughly washed in soap suds and then energetically rubbed with moist sand. This treatment will render them more surely aseptic than immersion in a solution of carbolic acid. Have we the time necessary the feathers may be sterilized by boiling.

Should we be called to a patient whose condition indicates the necessity for a rectal douche, and we find that there is a rubber tube in the house that can be fitted to the funnel, but that such an article as a canula is as rare as the fifth card in a royal flush. Here the goose quill is again called into play and if an eye be cut in the side all danger of wounding the parts with the sharp edge is averted.

Is the tube too large, then fit in a cork with your quill passed through it. In obstetric work if there be necessity for the use of the midwife's irrigator, the innocent goose quill is to be preferred to the possibly infected vaginal nozzle. Aseptic measures as above.

In case of a sudden call to a patient suffering with severe nose-bleed that will not yield to any of the ordinary remedies, here our goose quill may be made to do the work of a Bellocq's canula.

For this purpose the feathers are cut away on both sides of the shaft, which is then shortened somewhat, its sharp edges smoothed, and its end, protected by a small ball of wax. Now a nick is made in the shaft about one cm. from the end, so as to prevent the thread from slipping off. The feather is then passed shaft end foremost through the nose and the tampon fastened to the thread in the same way as with Bellocq's instrument.

In the case of a patient with a fish bone in his thoat, it is recommended to pass the feather end of the quill down and then to turn it around a few times, when the bone will usually be dislodged and removed on withdrawal.

To make a swab for use in the throat, etc., the following method is worthy of trial. Cut off the tip of

the quill. About one cm. back of this cut an eye and push absorbent cotton through this until it stands out in a ball at opening in the tip. Our swab is then ready, but the cotton must be thrown away and the feather sterilized after each application of treatment be continued.

In some affections of the eye and ear, the goose quill has a sphere of usefulness. For dusting powders into the eye a camel's hair brush is generally used, but its proper use requires a certain knack, which is too often wanting in the patient's friends. Here we may try the following method. Take a red-hot darning needle and burn a hole in the tip of the quill end of the feather, then around and close to this hole burn four others, with their openings directed forwards. Now cut off the quill and shovel up with the large end a small quantity of the powder to be used—calomel, iodoform, dermatol and the like—and shake it into the small end of our instrument, whence it may simply be blown into the eye. (In connection with this method it might perhaps be of use to ascertain whether or no the blower-boy has mucous patches concealed anywhere on his persons.)

A quill fixed in the same way may naturally be used for blowing boric acid or other substances into the ears, throat or nose.

The simplest and cheapest medicine dropper is a goose feather quill, the flow of liquid being regulated by the index finger over the large opening. For removing foreign bodies from the eye, a feather, cut either pointed or hollow, may be advantageously employed. An ear spoon may be made from any quill, and a nail cleaner is in the same piece. A pleasant way of inhaling oil of turpentine, or the like, is to put a few dops on absorbent cotton and pushing this into a quill to use it like a cigarette.

By cutting only the extreme tip of a quill we can make an excellent comedone key.

To make a practical iodoform, salol, etc., shaker, put a cork with a quill comedon key passed through it into the bottle. A handy little pocket powder shaker may be made by taking a long feather, cutting it off at the shaft so that the lower end remains closed, then cutting the tips off, filling the quill with the powder and putting on a new tip from another feather.

A slender dove's feather may be used as a sound. Cutting a thin goose feather in two equal parts gives us two directors that would be of great help in a pinch. By cutting the point of a quill we may easily make a very useful, small sharp curette.

Finally, instead of the glass rod we may use a quill for putting corrosive liquids on warts.

To how many uses now can the country practitioner put this little insignificant goose feather, and this is but one of the many things to be found in almost every household. Improvising is a fine art in medicine as well as in music and should be carefully and systematically studied.—Zeitschr. f. Krankenpflege.

The translator was once present at a lecture on fractures given by a prominent professor in Leipsic and, when the green-stick variety had been described at length, our professor stopped short and commenced looking for some object that evidently had been misplaced. Soon giving up his search, he apologized to the class and said that he had intended to have a cane there with which to demonstrate more fully this variety of break. Just then a young American physician from Cincinnati, who was sitting down front, handed him a common sulphur watch broken half through. A great light pierced the professor's brain and the lecture went on.

Gumption is an almost essentially American characteristic and when a foreigner does strike a brilliant idea the world must know it. This translation of a cutting taken many years ago from a Munich paper is a case in point:

"NEARLY A SERIOUS ACCIDENT.

"Yesterday afternoon Frau G., who lives in the Bamberger Hof, was ob-

liged to leave her 18-months' old child alone for a few moments, and on returning found it in convulsions.

"Dr. N., who was called in haste, found that the child had endeavored to swallow a large lump of sugar which could not pass. After several ineffectual attempts at extraction, Dr. N. asked the mother if she had any warm milk. This was then administered and the baby immediately recovered, and commenced laughing with pleasure as the sweetened fluid glided down his thoat, etc., etc."

AFTER THE FACULTY MEETING!

Prof. F. Log.—"I saw a rather odd case to-day, a lady brought her little girl to me for vaccination and said that she had already been vaccinated eight times without taking.

Prof. T.—"That is rather odd; but you all know X? Well, he has assured me that he was vaccinated five times and baptized twice without anything taking."

CHANDLER.

Therapeutics.

IN CHARGE OF

Dr. LOUIS LEWIS, Philadelphia.

BORAX IN EPILEPSY.

Fere (Rev. de Med., September, 1895) reports the results of the treatment of 122 cases of epilepsy by borax. The drug was given in large doses (2 g., rising gradually to as much as 20 g. a day), and in some cases for many months. In about two-thirds of the cases (71.31 per cent.) the treatment had no effect. In about a fifth (19.67 per cent.) some doubtful or temporary improvement was noticed, less than the benefit derived from bromides. In the remainder (9.01 per cent.) the improvement was marked, though the duration of the observations was too short to permit it to be stated that the improvement was permanent. The great drawback to the use of the drug is the frequency with which its continued use in large doses produces toxic symptoms. To this subject Fere devotes the greater part of his paper. The earliest as well as the most frequent symptoms are due to derangement of the alimentary tract. Nausea and vomiting, preceded, as a rule, for a few days by loss of appetite, and heaviness and burning in the pit of the stomach. In some cases these symptoms may be diminished or removed by administering intestinal antiseptics, or by giving the borax dissolved in glycerine instead of water. Extreme dryness of the skin with suppression of the fatty secretion, as well as dryness of the mucous membranes, may also be produced by the large doses of borax requisite in the treatment of epilepsy. The hair also is affected; it becomes dry, and may fall out, producing complete baldness. Various lesions of the skin may be produced by borax, among others (1) psoriasis in persons predisposed to that affection. The most common affection is a form of (2) eczema resembling seborrheic eczema. The affection begins as papules or circles with red squamous borders, which first appear generally on the lower part of the trunk or abdomen and on the upper limbs, in, that is to say, parts of the body where the sebaceous secretion is most scanty. Fine branny desquamation of the hairy scalp, with or without loss of hair, may accompany the appearance of a form of the skin affection to which the term seborrheic acne is applied. These skin affections disappear when the administration of borax is suspended, and may be kept under during its use by giving intestinal antiseptics or by resort to local treatment by oxide of zinc, sulphur or salicylic acid. Other less common affections of the skin are (3) the appearance of red plaques which may be confluent and very extensive, may present resemblances to the rash of measles or scarlet fever, and may be followed by desquamation. (4) A papular eruption, accompanied by pruritus, and followed sometimes by desquamation. The continued administration of borax produces in some cases a cachectic state, characterized by wasting, a waxy tint of the skin, discoloration of the mucous membranes, puffiness of the face, and sometimes general

edema. In a certain proportion of the cases of edema there is albuminuria, and in such cases uremia may develop with great rapidity. Borax appears in the urine in health half an hour after ingestion, and may continue to be excreted by the kidneys for weeks after the suspension of treatment. On the whole, Fere concludes that borax is more efficacious than the bromides in a small proportion of cases of epilepsy, and that, therefore, it should be tried when the bromides fail. It must be regarded, however, as a dangerous remedy owing to its power of producing or aggravating lesions of the kidneys even when given in small doses.

A NEW USE FOR THYROID EXTRACT.

J. W. White (Univ. Med. Mag., August) reports the following case: In March, 1894, a young girl, who was dressing in front of a mirror in a private carriage attached to a train, was thrown violently forward, her face striking the mirror, which was broken into many pieces. A large crescentic wound of the soft parts of the right cheek was inflicted. The wound was quickly cleansed and the edges brought carefully into position with interrupted sutures. Rapid union, entirely by first intention, followed, and the scar appeared satisfactory. In the following October it had become greatly hypertrophied and caused great disfigurement. Absorbent ointments, pressure by means of plaster, and other means of local treatment having been tried to no purpose, she was (in January, 1895) put upon thyroid extract, from two to four tablets of "a well-known preparation"—each tablet containing 5 grains—being given daily. All local treatment was discontinued, the scar being only covered with a film of collodion to prevent abrasion or irritation and to keep up gentle pressure. On several occasions marked elevation of temperature and quickening of pulse occurred, once to an alarming extent, but in a few weeks a perceptible change was noted, and at the end of about six weeks the scar had in almost its entire extent come down to the level of the surrounding skin and the dense base had disappeared. White does not claim that this was a case of true keloid, but he points out that the clinical distinction between keloid growths and hypertrophied cicatrices is, after all, based on the size of the growth and on its course than upon any more definite differences. He reports the case "for the sake of the suggestion to which its leads up of the trial of thyroid extract in other conditions involving the skin, intractable to operative surgery, and either on the border line of malignancy, like keloid, or definitely malignant."

Gynecology and Obstetrics.

HYPEREMESIS GRAVIDARUM; DIFFICULTY IN INDUCING ABORTION.

Charpentier (Reper. Univ. d'Obstet. et de Gynec., August 25, 1895) observed uncontrollable vomiting, from the beginning of pregnancy, in a secundipara, aged 28. At the third month the state of the patient was so grave that it was necessary to provoke abortion. A rubber bougie was passed into the uterus, and another on the following day, then a dilating bag, then Hegar's dilators from the smallest to the largest. Lastly, nitrate of silver was applied to the uterine cavity. The ovum remained unexpelled. These proceedings took five days. The patient was ultimately put under chloroform, and the ovum was detached by the finger. The patient recovered. She was hysterical, and Charpentier believes that hysteria is often the cause of uncontrollable vomiting in pregnancy.

MENSTRUATION AND OVULATION INDEPENDENT.

Byron Robinson (Amer. Gynec. and Obstet. Jour., August, 1895), in a discussion on menstruation, noted that all evidence favors the theory that ovulation and menstruation are independent. Ovulation, he remarked, occurs before birth in man and other

animals. Women menstruate who possess ovaries totally incapable of ovulating from disease. Menstruation frequently continues after removal of the ovaries, and is not required for the ripening and discharge of ovules. The sow seems to ovulate continually and progressively, but the ova ripen in greatest number at rut or estrus. Robinson believes that sufficient evidence exists to show that no follicle ruptures at many of the menstrual rhythms. Women who do not menstruate can become pregnant. If ovulation and menstruation occurred together coitus between healthy subjects just after the period would far more frequently be followed by pregnancy. Lastly, ovulation, in a modified form, continues during pregnancy.

THE MATERNAL IMPRESSION THEORY.

Hartmann (Munch. Med. Woch., 1895, No. 9) describes the birth and anatomical structure of a double monster (cephalothora copagus), and notes that the mother was alarmed, when pregnant, by seeing in a forest a new-born fawn showing a similar monstrosity. She considered that that adventure was the cause of the malformations in her child, and Hartmann seems inclined to support her opinion.

Medicine.

IN CHARGE OF
DR. E. W. BING, Chester, Pa.

DIABETES.

Worms (Bull. de l'Acad. de Med., July 23), as the result of researches reported in a previous communication to the Academy in December, 1893, came to the conclusion that in persons engaged in brain work and leading a sedentary life the proportion of glycosurics was 7 per cent. This conclusion he arrived at by examining the urine of 100 such persons, taken more or less at random. Further examinations of the same series of patients have raised the proportion of diabetics to 10 per cent., which he gives as representing the average frequency of the condition in any series of 100 scientists, artists, business men, doctors, lawyers, etc., between 40 and 60 years of age. Bertillon's statistics have shown that diabetes is on the increase, the mortality from diabetes in Paris having almost doubled between 1883 and 1892. All the cases discovered by Worms in his investigations are examples of the milder type of diabetes, in which the glycosuria can be controlled by diet; the patients have no particular symptoms, and with proper care may live almost indefinitely. As to the relative frequency of mild diabetes compared with the grave form of the disease, Worms quotes his own observations during the last thirty years. From 1863 to 1889 he had 41 cases under observation. In 1889 only three of these cases (one being in a child) had died within two years of the discovery of the condition, giving a percentage of 7 per cent. of serious cases. Of the rest 22 still survive, among them being an old lady, aged 83, whom the author has had under observation for thirty-three years, and in whose urine he has found no sugar for the last two years, her health in other respects being excellent. He is inclined to think that the proportion of grave to mild cases of diabetes does not exceed 5 per cent. With regard to the question whether mere glycosuria is likely to pass into diabetes with cachexia unless care be taken, Worms is not prepared to give a decided opinion, but he thinks that too much importance should not be attached to moderate glycosuria, even persistent, which is not accompanied by appreciable organic deterioration. He points out that even in those glycosurics who follow a fixed treatment and live always under the same conditions, the quantity of sugar varies within wide limits, great increase taking place under the stress of moral impressions or physical exertion. He cites many instances in his own practice in which diet and methodical treatment keep the quantity of sugar low or cause it to disappear for long periods, sometimes for years, even when the patient has returned to ordinary diet. It would, however,

be rash to predicate cure in any given case, Worms having often seen glycosuria recur after long periods of absence of sugar. As regards treatment, he says that diet must be the foundation of any system of therapeusis, but it should be rigidly adhered to only at the outset, when the degree of reducibility of the sugar in the individual case is being tested; if kept up too long it does harm and predisposes to coma. In the way of medication he believes most in quinine. Treatment, he adds, succeeds best in patients who are not anxious about their condition, which is always aggravated by worry.

NEW TREATMENT FOR TAPEWORM.

Dr. I. H. Newington reports in the Lancet a very successful treatment for tapeworm, which was revealed to him in prescribing for another trouble. A patient for whom he had prescribed a mixture composed of hydriodate of potass., gr. 36; iodine, gr. 12; water one ounce, ten drops three times a day in water, unexpectedly passed a dead tapeworm eleven yards long, of which there were no previous symptoms. The remedy has proved successful in three other cases, the last confirming in a marked manner the specific action of the combination. The remedy was given to a patient who had suffered for two years with a tapeworm, constantly passing pieces of the parasite, but failing with any treatment to get rid of the entire parasite. A short time after using the new remedy he passed a mass of dead tapeworm, and for a year there has been no return.—New York Med. Times.

Miscellany

THE MOVEMENTS OF THE FONTANELLE.

Hutchison and Elder (Edin. Hosp. Repts. III, 268) have obtained a number of tracings of the pulsation of the anterior fontanelle in young children. They exhibit a double pulsation, arterial and respiratory. The arterial pulse is almost invariably anacrotic, in which respect it corresponds with the tracing from a limb, or any considerable part of the body taken as a whole. The whole fontanelle is depressed with inspiration and bulged with expiration, owing in all probability to a suction of the venous blood out of the cranium during inspiration, and a damming of it back during expiration. Under pathological conditions the lowering of pressure during inspiration may be great enough to affect cerebral activity. During sleep the mean intracranial pressure is low, the arterial waves are small, the respiratory undulations well marked. Chloroform produces similar effects. The fontanelle is more tense, the arterial waves lower, and their summits more rounded than in the vertical. Movements evidently cause a marked increase in intracranial pressure, and this is particularly marked when the child cries.

HYDATIDIFORM MOLE AND MALIGNANT DECIDUOMA.

Fraenkel (Archiv. f. Gynak., vol. xlix., Pt. 3, 1895) has recently added to our knowledge respecting the malignant changes which sometimes take place in the uterus after gestation. Undoubtedly malignant decid uoma is often, on clinical evidence, associated with hydatidiform mole. Small portions of a mole of this class usually remain behind after the greater part has been expelled. The superficial epithelial layer (syncytium) of the chorionic villi proliferates considerably when a vesicular mole develops. It is precisely from this abnormal development of epithelium that the cancerous change known as malignant deciduoma is evolved. The deeper cellular investment of the chorionic villus (Langhan's layer), according to Fraenkel, takes no primary part in the development either of the mole or of the cancer.

PLACENTAL CIRCULATION AND MORPHINOMANIA.

Bureau (Report. Universal d'Obstet. et de Gynec., August 25, 1895) attended a patient who had taken

morphine for seven years, and who when he saw her took as much as 15 grains of that alkaloid daily. She was pregnant for the fourth time. At length she was spontaneously delivered of a child with talipes of one foot. As the cord was divided Bureau collected the blood of the placenta and umbilical vessels. On chemical analysis morphine was detected in the blood.

THE HYGIENE OF THE NURSERY.

Regular habits, proper food, and long hours of sleep are necessary conditions to a healthy infant.

The three prime essentials in the nursery are fresh air, good food, and pure water.

Never put a bottle nipple into your mouth, and then into the baby's mouth; this will often prove dangerous.

Always hold a baby in your arms when feeding it, in about the same position as if nursing it.

Feeding at night, after the third month, is both inconvenient and unnecessary; sleep at night is better than food.

Do not feed the baby because it cries; this may be due to pain, and it is hurtful to fill an infant's stomach at such a time.

Have a rule for feeding the baby and do not vary from it; without regularity the mother becomes a slave.

More infants' lives are taken by overfeeding than by starvation. Never liken an infant's digestion or diet to your own.

An infant's thirst is not quenched by milk; it needs clean water to drink with regularity.

Plain boiled water, given between feedings, will often aid the digestion and satisfy the child when restless.

Vomiting and diarrhea are indications that the child is either sick or approaching sickness, and probably needs a physician.

Cholera infantum would be of rare occurrence if proper attention was always given to the quality and quantity of the food.

A nursing mother who worries, or who is exhausted, or who indulges in excitement, may become a source of danger to her infant.

An infant is a creature of habit, and usually responds to the wish of the mother, if the mother has order in her will.

Rubber tubes, complicated nipples, and nursing bottles are dangerous and should never be used.

Light and loose clothing, frequent bathing, or cool sponging are necessities for the infant in hot weather.

Cleanliness, as applied to the body, the mouth, the food, the vessels, the clothing, the furniture, the floor, the carpets, the beds, and the atmosphere should be strictly observed.—Atlanta Med. and Surg. Journal.

EPIDEMIC CEREBRO—SPINAL MENINGITIS.

Righi (Rif. Med., June 24 and 25, 1895) reports three cases of this disease in which he found the diplococcus of Fraenkel in the blood, the urine, and in one of the cases in the feces. In each case the diplococcus was actively virulent and gave rise to cultures which proved active upon inoculation. The cases occurred in children of 16, 3 and 13 years respectively, and formed part of an epidemic of the disease which occurred in Sassari. The first two patients died; the third, which was a milder case, recovered. But even in this case the diplococci were freely found in the blood and urine, so that it cannot be said that the diplococci are only associated with severe cases.—Quadu (Rif. Med., July 8 and 9, 1895) reports another case (one of the same epidemic) in a child aged 6, who recovered, and in whose blood the same diplococcus was found. This case was also interesting from the fact that it was complicated by the development during the disease of a periarticular abscess about the left knee-joint and by a left otitis media with perforation. In each case the pus contained the diplococcus, that of the ear also containing the staphylococcus cereus albus and a slender somewhat recurved unfamiliar bacillus. In addition to the otitis and abscess the patient also suffered from arthritis of the right shoulder-joint.

The Times and Register.

VOL. XXX. No. 21. PHILADELPHIA, NOVEMBER 23, 1895. WHOLE No. 898.

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Original.

SUBCUTANEOUS INJECTIONS OF ARISTOL IN THE TREATMENT OF TUBERCULOSIS.

BY DR. S. S. GRUSDIEFF, OF ST. PETERSBURG.

Translated for the "Times and Register" from Therapeutische Wochenschrift, September 1, 1895.

Aristol, which was first prepared in 1890, by Messinger and Wortmann, was introduced into therapeutics in the same year by Eichhoff. This author experimented with it in a large number of diseases of the skin, and especially in parasitic affections, deriving excellent results from the remedy, which he ascribed partly to the liberation of free iodine and partly to the thymol contained in aristol.(1)

Nadaud was the first to employ aristol in tuberculosis. At a meeting of the Paris Academy, of Medicine, September, 15, 1891 (2) he reported the results which he had obtained in twenty-three cases of pulmonary tuberculosis by means of subcutaneous injections of aristol, after having observed favorable effects from the remedy in scrofulous and tuberculous affections of the joints, and after having completely convinced himself of its harmlessness. He dissolved 1.0 bm. aristol in 100. gm. sterilized sweet almond oil, and injected daily a Pravaz's syringeful of this 1 per cent. solution, that is 0.01 gm. aristol. Seven patients treated in this manner were improved to such an extent, after twenty-five to thirty days' treatment, that they could be considered completely cured; in five other cases rapid, but only transient improvement occurred; in three the cavities remained unchanged, while two patients died during the treatment, the one of tuberculous peritonitis and the other of diphtheria. On the ground of his observations Nadaud presents the following conclusions:

1. That aristol employed subcutaneously is perfectly innocuous.
2. It is chiefly eliminated by the respiratory organs.
3. It exerts an antiseptic action and gradually improves the nutrition.
4. The effect of the remedy manifests itself very rapidly, often as early as the sixth or seventh day of treatment, by diminution of the cough and the night sweats.
5. After twenty to twenty-five days an increase of the bodily weight can already be demonstrated.
6. Aristol acts favorably only in the first and second stage of tuberculosis, while it is useless to employ it in cases of cavities.
7. Subcutaneous injections of aristol produce no inflammation of any kind at the place of injection, but give rise to considerable pains.

The second article on this subject was published by Dr. Ochs, who at the suggestion of Professor V. Jaksch tested the results reported by Nadaud, which had been confirmed by

(1) Eichhoff, Mon. f. Prakt. Derm. (1890, Nr. 2) & Allg. med. Ctrl-Ztg. (1893, p. 601, 613, 625.)

(2) La semaine medicale. 1891, Nr. 46.

Dr. da Silva at the meeting of the Paris Therapeutical Society, February 10, 1892. Like Nadaud, Ochs also employed a 1 per cent. solution of aristol in sweet almond oil (after filtration and heating to 100-120 degrees C. for a few hours.) The solutions were always preserved in a cold and dark place. This treatment was employed in six cases, comprising two men, 22 and 26 years old, and four women, respectively 24, 31, 35 and 40 years of age. All the patients presented dullness and crepitant rales at the apices of the lungs. The results obtained by Ochs are in nowise as favorable as those of Nadaud. His conclusions are as follows:

1. Aristol produces no improvement in pulmonary tuberculosis. A perceptible improvement in the condition of the lung was not secured in any of the six cases, although the number of tubercle bacilli in the sputum diminished.

2. It would seem that aristol increases the secretion of sweat.

3. By the application of aristol the cough and secretion of mucous is facilitated; the cough becomes easier, the sputum more mucous, if previously it has been viscid, and is often secreted in greater amounts.

4. The injections of aristol are painful, although they do not produce a strong reaction or prolonged increase of temperature.

5. Poisonous effects were not observed.

6. The results obtained were not sufficiently encouraging to warrant continuation of the experiments.

Finally, in Italy Dr. Berardinone has tried aristol in the form of subcutaneous injections. Encouraged by the report of Nadaud, he experimented with the remedy in the wards of Professor Paolucci in the Neapolitan Hospital, Gesu e Maria, on twelve women suffering from tuberculous trouble. He employed aristol in far larger quantities than Nadaud and Ochs (1.5 gm. in twenty-four hours), and injected a 15 per cent. solution in various places of the body. On the ground of his observations Berardinone reached almost the same conclusions as Nadaud, which, in contrast to the experience of Ochs, are favorable to aristol. According to his investigations the remedy is useful in cases of pulmonary tuberculosis, which have not advanced too far, while it is inefficient where cavities are present. In mild cases the improvement is considerable and permanent; a reduction of the temperature, diminution of the frequency of the pulse and respiration, with relief of the cough and diminution of the expectoration take place; the night sweats disappear, there is a gain of bodily weight and increase of the number of red blood corpuscles and of the hemoglobin in the blood. Simultaneously a marked improvement in the local symptoms and a rapid decrease of the bacilli in the sputum is observed. The latter, as well as the disappearance of the night sweats, is noted even in severe cases. An increase of the temperature of the body after the injection was not observed, and after the employment of even large quantities of the remedy no symptoms of poisoning appeared. As regards constitutional effects aristol occasionally produces slight excitement with a feeling of heat in the body.

Aristol exerts no effect upon the urinary secretion. During the use of subcutaneous injections the urine contains iodine, but in very small quantity, in comparison to the proportion of iodine in the injected remedy. Among the unpleasant features of the treatment may be mentioned the marked pain caused by the injections and the resulting induration, which does not disappear until the lapse of a few days. Sometimes inflammatory processes arise in these indurated areas, which may produce a transient increase of the fever.

It will be seen therefore that two authors have declared in favor of the application of aristol in tuberculosis on the ground of experiments upon thirty-five patients, while one is opposed to the remedy on the ground of trials of six cases.

In view of the lack of therapeutic resources in tuberculosis, I decided to also institute experiments with aristol. The plan which I first conceived

(3) Prag. med. Woch., 1892. Nr. 36.
(4) La Rif. med., 1893, p. 460 and 470.

was comprehensive. I intended to study the effect of subcutaneous aristol injections, not only on sick persons, but also to experiment on guinea pigs, and it was my intention in the case of the latter to employ aristol at various times after innoculation with tubercle bacilli. To my great regret the second, and, to me most interesting part of this work, was prevented by my duties, and I confined myself therefore simply to the clinical and therapeutical side of the question.

My observations were made in the male wards of the Marine Hospital of Kronstadt, on sailors during the period from December, 1893, to February, 1894. For the injections I made use of one to 15 per cent. solution of aristol, in sweet almond oil, according to the method of Berardinone, at first in the pure state and in the second week with an addition of cocaine.

The injections were commenced along the back, from the supra-spinous fossa. As the patients received two or three such injections daily, it was difficult at the end of three or four weeks' treatment to find an intact place at which an injection could be made.

Almost all the patients, with the exception of four or five, complained of the severe pain attending the injections, which persisted from two to three hours. The majority experienced a sensation of burning which changed into a dull pain, rendering it impossible to lie on the back. In eight cases of very sensitive persons the painfulness was so considerable that the treatment had to be suspended in the first seven to ten days, at the urgent request of the patients. Objectively, after each injection, a marked swelling was noted, which was diminished by massage. The skin at the site of the injections was sometimes hot for two or three hours, but, thanks to asepsis, abscess formation never occurred. As was also observed by Ochs, the first injections produced elevations of temperature of 0.5 to 1.5 degrees, and a slight increase of the pulse frequency. Some of the patients complained of much weakness, lost their appetite and experienced lancinating pains in the chest and marked cough, although the majority greatly exaggerated these unpleasant sensations. In the course of the treatment these symptoms usually disappeared, or, in other words, the patients became habituated to the injections.

Altogether thirty-three patients were treated with aristol, eight of which interrupted treatment on the tenth day, and are, therefore, not considered here. Thus there remain twenty-five patients ranging in age from 21 to 27 years, all with bacilli in the sputum, dullness at one or both apices; twenty-two with crepttant rales at the apices; four with commencing formation of cavities, and four with tuberculous pleuritis. In ten cases incipient tuberculosis of the larynx existed, and in one a chronic tuberculosis of the peritoneum.

All these patients were domiciled in two adjacent well-ventilated and light wards. The dietary was that customary at hospitals, with addition of milk, eggs, wine or brandy, according to the desire of the patient. In short, they received the same care as the other patients.

The treatment consisted exclusively of injections of 0.01 to 0.45 gm. aristol daily (a syringeful of a one per cent. solution to three syringefuls of a 15 per cent. solution). In addition to the aristol treatment no antipyretics or narcotics were given. The duration of treatment varied, according to the character of the case, the results obtained, and other circumstances, from fourteen to thirty days.

During the entire course of treatment the following conditions were noted: The bodily temperature (two to three times daily), the state of the lungs and the other organs, the quantity and appearance of the sputum, the cough, the sweats, the bowels, the sleep and the subjective state. Furthermore, bacilli in the sputum were counted every three to five days. Once a week the patients were weighed on an empty stomach, and after evacuation of feces and urine. In general, the patients were very capricious, and the treatment was ren-

dered especially difficult by the painfulness of the injections.

Now, as regards the result of this treatment, the bodily weight of twenty-five patients who had been subjected to it for from fourteen to thirty days was increased in seven cases and somewhat reduced in seven, in consequence of the continuous high temperature and the progress of the pulmonary lesions. In eleven cases neither an increase nor a reduction of the bodily weight was noted. The increase in weight varied from three to eight pounds. The tendency to a decrease of temperature was manifested only in the course of the first week. On comparing the temperature during the first week with that during the last an influence upon the fever in the sense of a reduction could be determined only in seven cases. Especially striking was the diminution of the cough in twenty of our cases. Anyone who is acquainted with the "coughing concerts" of the tuberculous, in spite of the administration of large doses of narcotics, would be astonished at the quietness in our hospital wards in which no narcotics were employed.

The sputum became less tenacious during the treatment, and could be more readily expectorated. The quantity was reduced in nine cases, in two almost completely arrested, and in two others somewhat increased. As regards the number of bacilli, a decrease was demonstrated in nine cases and a complete disappearance in four cases (as determined by ten successive examinations), These last four patients manifested considerable improvement in every respect, and three of them could be regarded as apparently cured. In fourteen cases a considerable diminution of the night sweats occurred, while in the remainder these were not perceptibly influenced. There were no material changes as regards the urinary and fecal evacuations. The local pulmonary phenomenon showed no special change in the majority of cases; on the contrary an advance of the process was noticed. In three of the above-mentioned cases, however, the signs present at the apices disappeared, the fine moist rales subsiding entirely, while the areas of dullness became completely resonant. Four of our patients (two marines, twenty-one years old, of very weak bodily development and poor nutrition, and two sailors, aged twenty-one and twenty-three years respectively) died at an early period. All these four patients presented signs pointing to the presence of cavities already at the commencement of treatment, and the injections were undertaken at their own urgent request, although we entertained no hope of their success.

Among twenty-five patients, three were discharged completely cured, four died; while the remainder were slightly improved or remained unaffected by the treatment. At the same time I convinced myself that the subcutaneous Aristol injections had a favorable influence upon the cough, the sweats and the sputum in the majority of the cases. On the other hand, the application of the remedy was so painful that the treatment could in no wise be designated as agreeable. Although the pains can be alleviated by cocaine they cannot be completely arrested, since a dull pain remains for many hours, which may even disturb sleep of the patient and thereby act injuriously upon his subjective condition. I think that if the pains could be avoided the results of treatment would be much more favorable. Be this as it may, it would seem proper to study the influence of Aristol in tuberculosis, especially on intelligent patients, who, in the hope of improvement, would be ready to suffer any amount of pain.

On comparing my results with those of previous authors I am unable to coincide with Nadaud, Berardinone and Ochs. The first two have overestimated the value of Aristol, while Ochs is too pessimistic. I believe that truth lies here also in the middle. I have no doubt that, aside from the pains, which can be quite well tolerated, the Aristol injections are entirely harmless in the majority of tuberculous cases, although they exert but little influence upon the pulmonary process. On the

other hand, we have reason to hope—and this is supported by my last three cases—that in the case of some older patients Aristol may be of service, and that, therefore, further experiments, both on animals and human beings, are strongly indicated. In view of the great scarcity of remedies against so fearful an antagonist as tuberculosis we can unfortunately not be too discriminating. Our patients will not wait until we have found an absolute cure for all cases of tuberculosis, but demand immediate aid, and if we pass in review all our remedies against tuberculosis we will find very few that are serviceable, aside from a change of climate, which is available to but few patients.

A PRACTICAL STUDY OF THE BLOOD AND THE CIRCULATION, WITH A HISTORICAL REVIEW OF THE SUBJECT AND ITS BRIEF CONSIDERATION FROM THE STANDPOINT OF ITS CHEMICAL COMPOSITION, ANATOMICAL STRUCTURE, AND PHYSIOLOGY; INCLUDING CLINICAL STUDIES, AND EXPERIMENTAL RESEARCH ON THE LOWER ANIMAL.

BY THOMAS H. MANLEY, M. D.,
NEW YORK.

Continued from last number.

PART X.

ON THE ARTERIOLES OR PRIMARY CAPILLARIES AND CIRCULATION THROUGH THEM.

When one beholds the living blood-current in motion under the microscope for the first time, the most bewildering multiplicity of phenomena come into view. The tremendous energy of movement in the arteries, the rush, swirl and almost infinite diversity of motions in the capillaries, and the slackening of current, as the corpuscles pass on, to enter the venous rootlets, from which they are moved into the vein, in vast, dark waves, like columns of black smoke from a chimney, all combine to awaken a most lively interest. We will observe besides, in certain organs, very clearly defined, not only the vascular apparatus, but also the faintly marked lymph-channels, with their shadowy outlines, the medullated nerve terminals, pursuing a tortuous course with double contoured borders, Schwan's sheath, Ranvier's constructions, and the outlines of the axis-cylinder; besides among other things, mucous-crypts, the living, flat epithelia, in position with their distinct nuclei, their basis substance, and the stomata.

Altogether it is indeed a most marvelous revelation, a veritable panorama of nature, compared to which the nearest approach of imitation by art would have almost no comparison. After a patient study of the field we will observe certain definite characteristics in the various capillary districts; in the movement of the blood corpuscles and their color. We will note, too, that there are considerable areas which have no capillaries at all. We will observe in the webbing of the frog's foot that blood-corpuscles are carried to the base of the follicle, and swirl around it in a sort of cork-screw shaped vessel, but not a corpuscle penetrates into the ring of cuboidal epithelia, which it is composed of. It will be observed also that the capillaries dip under and cross over the nerve fibres, as these break up in their final ramifications, but none of them pierce the tubular terminals. We may witness this same feature in the spindles of smooth muscle fibre, and in the connective tissue elements, from all of which we must conclude that no blood vessels are in direct connection with the minute anatomical or histological elements of the body, and that their nutrition is entirely maintained by absorption and transudation.

The intercapillary spaces or meshes, however, vary widely in different organs and structures.

In the lung these are scarcely perceptible; in other situations they are about equal to the diameter of the

capillary. The largest interval between those vessels is in the tissue of the muscular coat of large arteries.

The vascularity of a part is determined by the relative diameter of those capillaries' meshes. In those organs in which the capillary walls are only separated from each other by little else than a structureless membrane, their vascularity is great. It may be well to bear in mind, as a practical fact, however, that the blood supply to a part is not always in strict proportion to the number of its vessels, but rather the capacity and arrangement of them; in other words, an organ may give issue to vast quantities of blood, that is quite devoid of capillaries; as in erectile tissue, like the corpora spongiosa, or the brain which contains an enormous quantity of blood, and yet is but scantily supplied with capillaries, and these are extremely minute.

In the primary capillary vessels or the arterioles, we will notice two features of striking interest. First, rhythm is lost, or but scarcely possible of detection; the corpuscles instead of being urged on by an intermittant impulse, are sent along in a steady rush. Now, in some of the finer arterioles we will observe secondly that they either break up into capillaries or are at once connected with the venous rootlets, thereby immediately sending the arterial blood unchanged into the venous system. This is best marked in the tongue and mesentery, but it may be seen also in the extremities. In this manner a considerable proportion of the blood is directly discharged into the afferent circulation, without making the circuit of the capillary-vessels. The corpuscular elements of the blood may be dimly outlined in these vessels, but these are yet indistinguishable. Along the track of these larger channels for a space of more than their own diameter, on either side, there are no capillaries. They apparently provide their own nutrition, probably by osmosis. Their walls are evidently extremely delicate, for when an animal is suddenly frightened and the peripheral circulation ceases they fade from view and become invisible. They are only delineated while the blood distends them. Although they are evidently provided with smooth muscle fibre, it does not appear that they ordinarily possess marked contractile power. They generally go on branching and breaking up, until they are finally lost in the systemic-capillaries.

As division and subdivision advances, the motion of their contained, corpuscular elements becomes less and less rapid—the sharp angles, curves, spirals and reverse curves soon offer such resistance as to quickly reduce the impetus of the torrent, to quiet streamlets, when we are in a position to study the capillary-terminals and their closed hematic elements with leisure and precision.

(To be Continued.)

THE RADICAL CURE OF ABDOMINAL HERNIA.

By Dr. E. Kummer (Revue Med. d. l. Suisse Romande).

The practicing physician of the present time is often called upon to give his opinion as to the possibility of cure in cases of hernia, and the sufferers from hernia, encouraged by the success attending the radical operation upon others, are in their turn desirous of obtaining the advantages which their companions in misfortune received from the operation.

The accident insurance companies and the legislators who need a knowledge of its curability to properly frame laws relative to the responsibility of employers and employed, are both interested in it. In our epoch of obligatory military service the State has a direct interest in the question since many conscripts who are physically sound in every other respect escape service on account of hernia.

However indispensable it may be for physicians to be well informed on this subject, yet it is practically possible for only a few of them to form, by numerous operations, a personal opinion as to the value of a radical cure, while the others can only form their ideas form a study of the literature of the subject, and this is enormous in amount. Now to the facts.

In the examination of recruits in

Switzerland from 1874 to 1884 there was an average of 0.0323 per cent. of ruptured, or annually 763 conscripts unfitted for service. Taking into consideration the fact that liability to hernia increases with age, it will be evident that the number of ruptured found in the recruits represents but a small proportion of the number in the entire population.

In the charity patients of the city of Paris P. Berger reckons 0.0277 per cent. are ruptured. In France, as a whole, this percentage, according to Molgaine, amounts to 0.05 per cent. of the entire population. Werner gives the same proportion for the population of the kingdom of Saxony.

As to the complications we will mention only the gravest: strangulated hernia. It is difficult to appreciate the risk run by a person suffering from rupture as regards this complication. No kind of hernia is free from the possibility of this accident, which may develop suddenly in all its gravity and with absolutely no precursory symptoms.

According to the figures in the Bureau central of Paris, P. Bergner found in 10,000 cases of hernia 246 of the strangulated variety or 0.0246 per cent., and he considers these figures as below the truth.

As to Switzerland, Dr. Zuillaume, director of the Federal Bureau of Statistics, gives the proportion of deaths certified to as from this cause as 0.026 to 0.034 per cent. in the decade 1884-93. The actual number of strangulations is evidently above this because, thanks to speedy surgical aid, the greater number of those attacked with strangulated hernia may be saved. In the clinic of Professor Socin, of Boston, alone, 12 out of 17 cases were cured by kelotomy.

The number of deaths, however, show better than any words the necessity for surgical interference before and not after strangulation makes its appearance.

Lucas Championniere (Paris, 1892, P. 578) has proved the existence of two other dangers menacing the ruptured: glycosuria and albuminuria, and without dwelling at length on them we need only mention the various abdominal troubles so often associated with hernia pains in the stomach, indigestion, constipation, diarrhea, vesical tenismus, functional troubles of the sexual organs, shooting pains in the back and legs, etc.

It would be an easy matter to prolong this list if necessary, but it seems sufficient to confirm the axiom that hernia requires a prompt and vigorous treatment. This treatment can only exceptionally be obtained by a hernial bandage (or truss). The treatment by bandaging seems to us, however, to be indicated in children up to the age of two years, for experience has shown us that a hernial bandage carefully adjusted and watched tends to cure the majority of infantile hernias. In adult age the case is altogether different; here the rupture is permanent and the truss is a daily torment.

What, then, is the situation of the ruptured person who wears a truss? To this question we can reply best by quoting the words of Mr. Lucas Championniere. There are hernias which protrude but little in persons making but slight muscular effort. For them the truss is a bandage or belt that they put on in the morning and take off on assuming the horizontal position in the evening; in short, it is a toilet article that they can conceal if necessary, that protects them and reminds them that certain muscular excesses are forbidden them.

These fortunate persons are by far the minority. Of the others, many suffer more or less constantly; the bandage holds the hernia badly. Must it be very powerful? then it is painful. Is it less firm, then it becomes useless or even dangerous for the hernia escapes. Such a person cannot take a low chair or go to the *water closet, even with a well-fitting bandage, without the hernia escaping. The pressure of the hand must often be added to that of the bandage for every effort.

Such a person suffers constantly; ulcerations form on the skin, the ac-

*We must remember that the French watercloset is only a hole in the floor with a block on each side for the feet.

cumulations of epidermis smell bad and cause irritation.

This torment and martyrdom from the bandage lasts a life time.

What may now be said of persons afflicted with hernia that can never wholly be reduced, with which the individual never has the power of making a vigorous effort and who is always in danger of hernia strangulating?

In the ruptured patients of the last mentioned class, strangulation may be directly caused by wearing a spring truss; therefore it is absolutely necessary for them to have recourse to some other method of treatment.

(After a careful review of the pathogenesis of hernia our author continues).

In the table that follows of the results of the modern radical cures we have paid especial attention to two questions that seem to us to be of paramount importance, that of the mortality and that of the relapses. We shall commence with the latter.

Before proceeding further we must call to mind that every hernia coming in the place of the old one after a radical operation must not necessarily be considered as a relapse. The existence of a relapse only becomes evident in cases where the new hernia presents the essential characteristics of the old one. For instance, a patient who, after the operative cure of an oblique inguinal hernia becomes a sufferer from a direct inguinal herna has no return of his old trouble, but a fresh hernia and in this case there should be no more question of a relapse than if he had a crural hernia or an inguinal hernia of the other side. To demand of the operative cure the definite obliteration of a hernia is no more than right, but it would be foolish to expect this operation to prevent the formation of other varieties, nevertheless the tables given by the best authorities have such incomplete descriptions as to often leave in doubt whether or no the hernia described as a relapse really was one.

(To be continued).

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Communications are invited from all parts of the world. Original articles are only accepted when sent solely to this Journal. Abstracts, clinical lectures, or memoranda, prescriptions, news and items of interest to the medical profession are earnestly solicited.

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SPRAINS AND THEIR APPROPRIATE TREATMENT.

Primrose (Canadian Practitioner) holds that the aim of treatment for sprains is the early absorption of effused material and the prevention of adhesions. For the immediate treatment of a recent sprain pressure is of paramount importance. This should be applied as follows: The joint—say the ankle, for instance—is placed at a right angle (or, if possible, at less than a right angle) with the leg, then cotton-wool or ordinary cotton batting is applied evenly over the foot from the toes upward to the

middle of the leg. The amount of wool must be considerable, loosely applied; it should be fully three inches in depth. Over this is applied the bandage from the toes upward, which is drawn as tight as possible. There is no danger of making too much pressure, provided there is sufficient cotton-wool. This usually alleviates pain immediately by affording pressure to the blood vessels and keeping the part at rest. The bandage and wool are removed at the end of a few days, a week at the longest, and carefully instituted passive movement is employed; then the dressing is reapplied to prevent further effusion. In ten to fourteen days cotton-wool may be dispensed with and the support of an ordinary flannel roller substituted. The patient is able to use the injured joint for ordinary purposes after the lapse of about three weeks in the majority of severe sprains. In sprains of slight severity massage may be begun at once with excellent results, and in old sprains massage is by far the most appropriate treatment and indispensable in order to effect a cure. Heat and cold are at best temporary methods of relieving congestion, and do harm if employed too long.

TRYPTIC DIGESTION AND THE INTERNAL SECRETION OF THE SPLEEN.

A. Herzen (Rev. Gen. des Sciences, June 15, 1895) revives the theory as to the influence of the spleen on pancreatic digestion, which Schiff was the first to put forward in 1862. It has long been known that the digestive action of pancreatic juice on proteids is not continuous but intermittent, and that it appears regularly with the process of gastric digestion. Schiff showed that in animals from whom the spleen had been removed, neither the pancreatic juice nor an infusion of the pancreas had any digestive influence on proteids. Herzen has combined Schiff's views with Heidenhain's researches on zymogens. He finds that the volume of the spleen at any moment varies directly as the amount of trypsine in the pancreatic juice, and inversely as the amount of zymogen. Thus the maximum quantity of zymogen is present during starvation, when the trypsine and splenic dilatation are at their minimum. Six or seven hours after food the conditions are exactly reversed. Furthermore, admixture of infusion of congested spleen greatly aids the pancreatic digestion of proteids. The blood of the splenic vein has a similar action, that from other vessels none. Herzen concludes that in the living pancreas the protrypsine is transformed into active trypsine by the influence of a substance produced in the spleen in quantity proportional to the intensity of its congestion. The substance finds its way to the duodenum through the general circulation.

HYMENODICTIONIN.

Coronedi (Gazz. degli Osped., July 27, 1895) has experimented on the toad with this alkaloid, which is derived from the bark of hymenodyction excelsum. Solutions of the drug —0.02 gr. in 100 c. cm. of nutritive fluid—exercise a marked effect on the heart. First, there is a short phase of irregular movements, and then a true diastolic arrest. The heart can easily be made to resume its natural movements by passing simple nutritive fluid through its cavities. Finally, however, the heart ceases to beat, generally in systole as regards the ventricles, while the auricles remain flaccid. During the phase of diastolic arrest the heart, especially in the auricles, is enormously distended, and may reach double its size. Vermicular movements observed at this phase in the ventricles. The author thinks the drug is a nerve poison rather than a muscle poison. There seems to be a certain analogy between its action and that of digitalis. Hymenodictionin does not appear to be a very powerful drug, as its effects could easily be removed by passing simple solutions through the heart.

Electro-Therapeutics.

IN CHARGE OF
DR. S. H. MONELL, New York.

FARADIC SEDATION IN ACUTE GLANDULAR INFLAMMATION.

Stimulation and muscular contraction is so generally associated with faradism (as this form of electricity is commonly applied) that its useful powers of sedation, when properly modified in tension and rate of interruption, are lost sight of by the great majority of physicians.

Those who are familiar with its sedative properties, and who possess apparatus designed to give out the essential current, employ it chiefly in gynecological practice, rather than upon the surface of the body.

A case of axillary adenitis was recently treated by the writer with prompt control of the pain and satisfactory progress of resolution under the influence of the rapidly interrupted high tension induction current obtained from my own improved apparatus.

So little has been written, however upon clinical experience in this direction that as editor of the electro-therapeutic department of "The Times and Register" I invite the special attention of readers to the exceedingly interesting and valuable report, which follows. I fully indorse the statements of the author, Dr. O. L. Williams, of Dallas, Texas, whose previous letter upon this subject was contained in the issue of October 26.

* * * * * * * * * * *

In selecting the following case as a basis on which to formulate my method of treating this class of cases I do so because of its acknowledged intractability and widespread destruction of muscular and bony structures. Sloughing of the soft parts is common, and necrosis of the bony structures not infrequent. In addition to this the case was, indeed, a typical one, and continued to grow rapidly worse under the means ordinarily used to arrest it.

Miss E. L., age 16, a young lady of exceptional constitutional vigor and fine physique, in the third week of typhoid fever developed a most violent inflammation of the left parotid gland from occlusion of the buccal duct. The temperature at once mounted up to 104 degrees, tongue dry and pain in the region of the gland so decided that hypodermics of morphine failed to give comfort, as the gland continued to secrete, with no outlet for the accumulating secretions. The tumefaction and swelling became more and more pronounced, until all the structures on that side of the neck, as far down as the clavicle, became involved; deglutition became difficult, and only liquid nourishment given with a spoon was possible. For three days, with anodyne embrocations, hop stupes and poultices, together with internal medication, embracing calomel, aconite and phenacetine, I endeavored to stay the inflammatory process, without avail. The inflamed zone began to show unmistakable evidences of blood stasis in a dusky, dark red color, accompanied by an unyielding temperature.

I at once apprised the family of the gravity of the case, and intimated a possibility of sloughing of the gland and contiguous parts, with a possible necrosis of the bony structures. I likewise stated that a resort to surgical means by laying open the gland and following it up with antiseptic irrigation and antiseptic dressings, would give the desired relief, but the young lady would have an unsightly facial blemish, which she begged me, if possible, to avert. My past experience with faradic electricity in inflammatory troubles encouraged me to offer the family a hope that with it I could arrest the inflammation, preserve the integrity of the gland, limit the destruction of tissue and avoid the much-dreaded facial blemish, if they would only patiently and perseveringly co-operate with me in the treatment. The mother, a lady of culture, responded with the declaration that, while a resident of Aberdeen, Miss., her family physician was a man of fine professional ability, and, as he had never mentioned electricity, she had little faith in it as a remedial agent. I humorously replied that whatever

her faith might be, the physiological effects of the electricity would in no wise be affected by it, and, as to her former physician being ignorant of its therapeutic value, this was not surprising, as there were thousands of others who stood in the same unfortunate relation to it. However, as I had in my favor the entire confidence of the family, they were not slow in giving their consent for me to proceed.

An electrode, well padded with absorbent cotton and large enough to cover well the entire inflamed surface, was at once applied and connected with the positive cord. The negative electrode, to avoid the multiple nerve plexuses that would necessarily have been brought into the circuit if applied on the head or spine, was applied to the feet. The primary short, heavy coil of a Tip Battery was used, and the electrodes kept constantly wet with a warm salt solution. A current barely perceptible to the patient was turned on, and the seances ordered one hour in every four. All other local treatment was suspended. After the first 24 hours the tension of the parts was lowered, the capillary circulation was improved, diverting the blood to other channels, the integrity of the blood channels in the inflamed area was slowly being restored, and extra-vascular pressure proportionately reduced. With the reduction of tension and extra-vascular pressure, and the arrest of transudation, the nerve filaments were being relieved of pressure and pain was proportionately lessened. The temperature record showed a slow but gradual decline from day to day (no antipyretics being used), but did not reach the normal point until the tenth or twelfth day. No opiates nor anodynes were given, the patient being encouraged to bear a moderate amount of discomfort, rather than incur the risk of locking up the secretions with opiates. After the tenth or twelfth day the fever and pain subsided, the tongue became moist, the appetite improved, my patient was comfortable and remained so to the end. Having now arrested the inflammatory process, after a most stubborn fight, I set to work to remove the inflammatory products. And in this connection I feel constrained to emphasize the great superiority of faradic electricity, at least in some forms of acute inflammation, over the therapeutic agents ordinarily used, because in it we possess a remedial agent that not only favorably modifies, limits and shortens the inflammatory process, but in the same physiological manner hastens resolution, removes the inflammatory products and promotes repair. That faradic electricity will do both has been demonstrated absolutely in my own personal experience, and my assumption in nowise does violence to the well-known physiological effects of the current. This dual action of faradic electricity is without a parallel in therapeutics, and will, when better understood, give to it a prominence and range of application supremely above the host of agents that have from time immemorial been plied to extinguish inflammatory trouble. Indeed, I assert without fear of successful contradiction, that there is not one single agent in the entire therapeutic list with physiological effects so clearly drawn and better adapted to arrest inflammatory processes than is faradic electricity.

My recent preceptor in gynecology, Professor Byron Robinson, of the Post-Graduate Medical School of Chicago (and should he chance to read his name in connection with electricity, I in advance ask his pardon, because of his inveterate hatred for electricity), with all the emphasis a man of his fixed convictions could enunciate, repeatedly stated to the class of physicians of this year that in all conditions of blood stasis the sheet anchor, the great weapon of defense, the power behind the throne, was the weapon that kept the blood current in motion. The blood must not linger nor tarry in the blood channels, but must be induced to move on, and he referred to the benign effects of poultices in pneumonia, and of hot douches in metritis by way of illustration; in pneumonia, to induce the blood to flow on, and to contract pulmonary vessels; in metritis, to induce stagnant blood to flow more rapidly, and secondarily to

permanently contract vessels. That great pathologist, Senn, has truthfully declared in terms not to be misunderstood that the "great desideratum never to be lost sight of in inflammation is to preserve intact the blood channels; that whatever impairs the vis a tergo of the circulation proportionately augments the inflammatory process. That the coal tar products so popular at present are hurtful antipyretics in inflammatory fever, because a reduction of temperature is secured by directly lessoning the heart's action."

It must be admitted, as a general axiom, that congestion not only precedes, but predisposes to inflammation by lessening the resistance of the tissues. And for local infection there must be at least three factors, viz., microbes having active pyrogenic power, a medium favorable for their development, and a loss of tissue resistance; to these might be added the condition of the local circulation and vitiated or perverted secretions.

A proper conception of these several factors demonstrates unquestionably that in congestion, as well as inflammation, the only scientific rational method of arresting either is to keep open the blood channels, thus preventing the aggregation of the leucocytes and stagnation in the blood streams. Whatever will do this will proportionately lessen exudation, transudation and extravascular pressure; prevent tension and limit pain. Not only so, but whatever modifies or lessens these inflammatory factors must necessarily limit the inflammatory products, and we have fewer to remove after the arrest of the inflammation. Faradic electricity, through its mechanical action is the only agent that meets all these indications.

It is likewise no great presumption to assume that it is no less potential in the treatment of infected wounds—and why? Because in the first place its benign effect on the circulation keeps in contact with the infected area the highly vitalized blood. This reinforces the adjacent tissues and increases their power of resistance. In the second place, by keeping open the blood channels distension of the capillary vessels, with subsequent rupture of their walls, is in large degree prevented, and inasmuch as the leucocytes are recognized as carriers of infection and are found in the products of transudation and exudation that always pour out through these breaches of continuity, the importance of preventing these vessels from rupture cannot be overestimated. Overdistension is in some degree also prevented by the pronounced effect faradic electricity has in maintaining a healthy collateral circulation, and in constricting the arterioles. But I must hasten on after justifying this digression on the score of endeavoring to explain how faradic electricity can discuss inflammation from a physiological standpoint.

In the case reported, whose history I followed to the tenth or twelfth day, would say, after the arrest of the inflammation there was still considerable swelling and engorgement, and the applications were continued for fifteen days longer, to remove the inflammatory products, with perfect restitution at the expiration of that time.

The latter part of the treatment was made with a more stimulating current from the secondary induction coil, and the current never used strong enough to produce pain. The seances were (as they should always be) shortened to thirty minutes, and only used two or three times a day. Currents of high tension must not be used more than fifteen or twenty minutes or bad results will follow.

The recovery was perfect, there has been no recurrence, and the young lady is here to testify to the truthfulness of my statements. The mother, who at first evinced so little faith in electricity, said to me, when I discharged the case, that if she ever got sick she wanted me to treat her, and it mattered not what her sickness was, she wanted me to treat her with electricity. Lastly, I wish to say that, while I visited the case thrice daily for the first ten or twelve days, and every other day the last fifteen, the applications were made by the young lady herself, and on

many occasions, when using the battery, the effect was so soothing she continued the seances two, three and four hours. In conclusion I could mention other cases, but, as the applications were alike in all, I see nothing to be gained by giving their histories. He who would call in question what I have recorded in this case would not be convinced with the history of a dozen cases.

TRANSLATIONS FROM

Foreign Exchanges

BY DRS. CHANDLER AND DAVIDOW.

THE QUESTION OF STITCH ABSCESSES.

Lauenstein (Beilage zum Cent. fur Chir., 1895, No. 27) discussed before the German Surgical Congress the cause of the stitch abscesses observed in patients after aseptic operations. He made 216 observations on different suture and ligature materials in regard to their bacteriological relations. Among these bacteria capable of development in so-called sterilized catgut were found 35 times. In 149 samples, 107 were sterilized by dry heat; but 29 were afterward found to contain bacteria capable of development. The bacillus subtilis occurred most frequently, although the micrococcus tetragenus and staphylococcus albus were also found.

The author summarizes his observations as follows:

1. Clinical observation shows that there are cases of wound infection which have their origin in the catgut used in the operation.

2. It cannot be definitely settled in any case that the catgut was the source of infection.

3. But it can be said that the so-called sterilized catgut sold in shops contains bacteria capable of development and growth.

4. So long as this catgut is found to contain bacteria it cannot be free from the suspicion of being the source of infection in wounds.

In the discussion that followed, Kocher, of Bern, said that since 1888 he has employed silk only, and that in his goitre operations before that time he had only 35 per cent. of absolutely primary healings, while since then he has had 85 per cent. Kocher believes that the suture material should be not only aseptic, but also antiseptic.

The past winter he has placed his silk in a watery solution of arsenious acid, and as a result in 35 cases has had absolutely primary union.

FATAL ECLAMPSIA—PARAMETRIC STRICTURE OF ONE URETER.

Favre (Virchow's Section, Vol. cxli, Part 2, August, 1895) publishes an important clinical note. A woman, aged 24, eight months pregnant, was taken on February 3 with headache, vomiting and pelvic pain. A faint trace of albumen was found in the urine. Digitalis and ipecacuanha were given. After temporary improvement she was seized in the evening of the sixth with a series of violent convulsions. The temperature rose to 101 degrees after one fit, but a few hours later, after another fit, it was as low as 94 degrees. Urine was scanty, and highly albuminous. Milk, digitalis, and large doses of chloral were given, and the patient was bled. Twenty-four hours after the fits began the temperature was 102 degrees. Three hours later the patient died. Favre points out that many obstetricians maintain that rise of temperature in a pregnant woman attacked with fits is pathognomonic of true eclampsia gradivarum, fall of temperature signifying uremia. At the post-mortem examination the left ureter was found pervious and otherwise normal. The right was widely dilated from the kidney to the brim of the pelvis. Below it seemed to run into the uterus. On careful dissection it was found to be completely obstructed by parametric deposit, which was firmly pressed upon by the pregnant uterus. The placenta contained white infarcts; the fetus was relatively small. The right renal pelvis was hydronephrotic. The substance of the gland was markedly variegated. the cortex being bright red, the medulla deep blue. The capsule was

easily separable. The left kidney was also inflamed, but the inflammatory process was uniform on its glandular substance. The liver was fatty, with numerous hemorrhagic foci.

BORAX AS AN AID TO THE DIGESTION OF MILK.

M. Germaine See announces the clinical fact that borax used internally is a valuable aid to the digestion of milk. He discards the use of carminatives, charcoal and other intestinal antiseptics, claiming that they injure the mucous membrane of the intestines. He employs laxatives —hydrastis canadensis, castor oil and oilive oil—in large doses, or oil enemata. Professor See holds that in many cases of indigestion the stomach is erroneously treated, when the real cause of the disease is the intestines, which are often the seat of membranous enteritis resulting from constipation, and giving rise to glairy, mucilaginous, cylindrical masses of mucus, with pain and swelling over the region of the colon. These symptoms easily distinguished the cases referred to from ordinary constipation, in which there may be easily seen masses of filamentous or vermicelli-like mucus.—Med. and Surg. Reporter.

SUTURE OF THE VAS DEFERENS.

Parlavecchio (Gass. degli Osped., August 31, 1895) in operating for a right strangulated hernia, had the misfortune accidentally to lacerate the vas deferens. To remedy this the author thereupon cut the two ends of the vas obliquely, so as to form a larger surface, and sutured them together with four Lembert sutures of fine silk. Torsion of the vas was carefully avoided, the stitches held well, and beyond the application of a scrotal suspender no special modifications in the ordinary post-operative treatment were adopted. The wound healed by first intention. The patient came to report himself two years after. The hernia was then quite cured; there was no swelling, no cyst of the vas deferens, no diminution of sexual desire, no atrophy of the testicle, no loss of sexual vigor, and no disturbance of micturition of defecation. The author was unable to examine the state of the prostate per anum, but there were no symptoms pointing to any alteration in that organ.

SUBCUTANEOUS EMPHYSEMA AFTER INTUBATION.

Bauer (La Pediatr., No. 7, July, 1895) reports two cases of diphtheria in children where after intubation subcutaneous emphysema occurred. In the first case, that of a child aged 4, suffering from mild nasopharyngeal diphtheria, as difficulty of respiration came on, intubation was performed. Violent coughing occurred, and the tube was expelled, but was replaced. The day after emphysema of the neck and upper abdomen occurred, and rapidly spread to the back. The tube was removed, the emphysema remained unaltered at first, but ultimately entirely disappeared, and the child left the hospital cured. The second case was very similar. The tube was kept in two days, and finally removed on account of emphysema, which lasted in this case five or six days, but finally disappeared. The author supposes the emphysema was due to alveolar rupture induced by the violence of the inspiration, and that the tube simply acted as a "determining factor." In 800 cases of intubation Bauer has only observed these two cases of emphysema.

SUBCUTANEOUS CAMPHOR INJECTIONS.

Schilling (Munch. med. Woch., September 17, 1895) refers to the means of overcoming collapse by ether, musk and camphor administered subcutaneously. Ether has a markedly evanescent effect. The tincture of musk, although a valuable cardiac stimulant, is not constant in its composition. Hence camphor is very generally employed. The author maintains, however, that the doses of camphor used are not large enough. He says that as much as 1 gr. of camphor may be employed. The effect of 0.5 gr. on a thready and almost imperceptible pulse is well

marked, but that of 1 gr. is often astonishing. The solution of camphor used is camphor 1, olive oil 10. He gives one ordinary syringeful to children, seldom three, and mostly five to ten to adults. These large doses of camphor are well borne. No ill effects on the skin, brain or lungs have occurred. Fear of fat embolism should scarcely exist, since hardly a case of the kind has been put on record. The author then refers to the small doses recommended in the recognized textbooks. Probably large doses of camphor act differently in animals than in man. Even in cases with cerebral symptoms the author has used these large doses without any increase in those symptoms. Camphor leaves the body within a couple of hours, and has no cumulative action.

Surgery.

IN CHARGE OF

DR. T. H. MANLEY, New York.

THE USE OF VINEGAR FOR THE ARREST OF VOMITING AFTER THE ADMINISTRATION OF CHLOROFORM.

Lewin (Rev. de Chir., September, 1895) has obtained very good results with regard to the prevention of sickness after the administration of chloroform by immediately replacing the inhaler by a linen cloth steeped in vinegar, and allowing this to remain over the patient's face for at least three hours after the completion of the operation.

HYDATID CYST OF THE OVARY.

M. Demous has reported a case of hydatid cyst of the ovary. This, he says, is very rare and difficult of diagnosis. He reports a case in a young woman who after marriage discovered a swelling in her right side. This remained stationary, and did not increase in volume until her third confinement, when its size seriously interfered with delivery. The forceps had to be employed and the infant survived but a few moments.

Some time after this she came under Demous' care for operation of what was supposed to be an intraligamentous fibroid.

On operation it was established that the side was as suspected, but the mass was found to consist entirely of ecchinococci. It was found necessary to tap the tumor three times before definite cure succeeded. He mentions that it is very unusual to meet with these parasitic growths, isolated; and that they are more commonly scattered and diffused among the meshes of the peritoneum.—Le Mercredi Med., Oct. 2, '95.

CONGENITAL DISLOCATION OF THE HIP AND ITS TREATMENT.

BY LANNEBOUGUE.

(Congres D'Obstetrique Gynecologie Et Pediatry, Tenu a Bordeaux, 8 a 14, Oct,, '95.

At this important meeting there was a prolonged discussion on Lannebougues' essay on congenital displacements, luxations and subluxations of the hip-joint. The author believed that the pathology of this condition was extremely complex; sometimes depending on articular malformation, a non-development of the cotyloid-cavity, an absence of the ligamentous stays, or what was most frequent, a muscular atrophy and degeneration, allowing of a falling outward of the head of the femur. In some there is an arrest of growth in the epiphysis, with irregular cartilage formation.

In some of these cases there are coincident defects of development, all the way down the limb; the femoral curve is absent or exaggerated, and we will often find luxation of the patella.

Cachexia, or strumor syphilis, or rickets does not seem to act as a causative factor.—Le Mercredi Medical, Oct. 25, '95.

Broca believes that the dislocation is a real congenital defect of intra-uterine development; and, contrary to the opinion of Verneuil, that it is not paralytic. Reduction is often out of the question, because of the

want of a cotyloid cavity to hold the femoral head in place after reduction, and besides, mascular inertia to support it. In many, in order to relieve the patient of the rigidity of the joint deformity and great lameness with lordosis, it becomes necessary to excise the head of the bone. This is best accomplished through Lorenz incision anteriorly, by which operation is rendered easier, and accuracy of operative manipulations is practicable.

Some have undertaken to gouge out a cavity for reception of the femoral head, and a few have succeeded in this manner, fixing the joint the anchylosis has followed with little if any improvement in the joint action.

MULTIPLE WOUNDS OF THE INTESTINE AND THE GRAVIDE UTERUS, BY A BALL FIRED FROM A REVOLVER. PROLAPSE OF THE UMBILICAL-CORD, THROUGH WOUNDED UTERUS. LAPAROTOMY. RECOVERY.

BY DR. ALBERRAN.

(Reported By Pozzi.)

Late in the evening of October 2 a young woman, 19 years old, was admitted into Cochen Hospital, Paris, into M. Quene's service. She was four and a half months pregnant, and had shot herself just below the navel. After the weapon was fired she fell, but soon recovered consciousness. Vomiting soon set in, but the materials contained no blood. But she was in great shock. Many injections of ether and caffeine were made, and one injection of 400 grammes of artificial serum were administered. The wound was covered with gauze and the abdomen enveloped in iced cloths. Alberran found her on his arrival in a semi-comatose condition. The face was pale and the body covered with cold perspiration. The abdomen was somewhat ballooned, and on a line about five inches to the right of the umbilicus the opening made by the ball could be seen.

Immediately preparations were made for a laparotomy.

At 11 P. M., five hours after the accident, the abdomen was opened. A long incision was made, extending from the umbilicus to the pubic union.

On opening the peritoneum a large discharge of serum escaped. Now the entire intestine was eviscerated, it being well protected by warm towels.

Blood issued freely from every direction, so that it was necessary to employ sponge packing to control it. About ten inches of the small intestine was found so riddled by the bullet that it had to be resected. An end to end anastimosis was made, using silk as a suture; first sewing together the mucous surface, the muco-mucous suture, and then the sero-serous suture of Lambert was employed. Farther on the fifth opening into the bowel was discovered. This was sutured. Now the source of the hemorrhage was sought for, when several lacerations of the mesentery were found and closed. The patient was then placed in the Trendelenburg position, as then we find deep-seated concealed bleeding. At this juncture the prolapsed umbilical cord came into view through an opening in the wall of the uterus. This was seized, well drawn out and cut off. When this was returned the wound was clearly sutured. The intestines were then replaced and the abdominal wall sustained, leaving only an opening at lower angle for the end of the gauge wicking, which was packed into Douglas' pouch.

The operation lasted one hour and twenty-five minutes. She aborted the same night, but finally made an excellent recovery.—Bulletine Et Memoires, Soc. De Chirurgie, Mai et Juin, '95.

CAUSE OF EARLY DEATH AFTER OPERATIONS ON THE INTERNAL ORGANS.

Thiercelin and Jayle describe the necropsies made on seven cases of abdominal section (five removals of appendages, one ovarian cyst, one abdominal hysterectomy) which had

died, six within three days and one within six days after the operation. In five, including the case which lived six days, there was distinct acute fatty degeneration of the liver. In the remaining two, where the lesion could not be detected by the naked eye, cloudy swelling of the hepatic cells was discovered on microscopical examination. It is expressly indicated that in none of the seven cases did suppurative peritonitis exist. Thorelon and Jayle then examined the liver from a case of death from hemorrhage six hours after operation for a ruptured extra-uterine fetal cyst. The liver was absolutely free from fatty changes. But in the liver of a child that died a week after an operation for congenital dislocation of the hip acute fatty changes were discovered. The same condition was seen in the liver of a man dead from septicemia due to phlegmonous inflammation of the larynx. Other evidence is infected by streptococci. Cirrhosis, etc., predispose greatly to this infection after laparotomy.—Annals Ardmüs of Gy., Gaillard's Med. Jour.

CORK SPLINTS FOR DEFLECTIONS OF THE NASAL SEPTUM.

Dr. Berens reports excellent results from the use of a simple device for a splint in cases of fracture or operation for deflected septum nasi. Plugs of cotton or oakum become too readily foul, while the various supports which have been used have many disadvantages, the soft-rubber tubing being too yielding, while the hard rubber or ivory plugs cause too much pressure and pain. Berens makes his splints from corks in the following manner: A selected cork (pint-bottle size), in average length one and a sixteenth to one eighth of at its broad end three-quarters of an inch, at its narrow end one-quarter of an inch less, is whittled to the shape of an almond with the point cut off, and flattened on the side that is to lie against the septum; the opposite side near its lower border is slightly grooved for the reception of the inferior turbinated body. A nasal burr or trephine is now used to hollow the splint, leaving the shell one and a sixteenth to one-eighth of an inch thick. A rat-tail file, a small-bladed knife or red-hot metal may also be used for this purpose. Sandpaper is used to smooth both the inner and outer surfaces, and the whole splint is then coated with flexible collodion, to which has been added iodoform in the proportion of thirty grains to the fluid ounce, allowed to dry and it is ready for use The making of the splints requires no especial mechanical skill, and they can be modified with ease to suit the peculiarities of each case. The special advantages of these splints, which are possessed by no other similar device, are the quickness and ease with which they can be made and shaped to fit the peculiarities of each case; their cheapness, lightness, and elasticity combined with sufficient firmness to support the septum; their durability and non-conduction of heat and cold and non-interference with the free circulation of the blood; the ease with which they can be cleaned in situ by washing out with peroxide of hydrogen and boric-acid solutions, followed by an oily spray, as benzoinol, and the length of time they can be worn without pain, discomfort or severe ulceration.—Boston Medical and Surgical Journal.

Medicine.

IN CHARGE OF
DR. E. W. BING, Chester, Pa.

MENTAL SYMPTOMS OCCURRING IN BODILY DISEASE.

Reynolds (British Medical Journal, September 28, 1895). Mental symptoms occurring in bodily disease may be divided into those slight mental changes in the feelings and emotions not amounting to actual certifiable insanity, and actual insanity. The slight mental states may be roughly subdivided into pleasurable feelings, depressed feelings, conditions of mental dullness, abnormal irritability of temper and feelings of terror. His conclusions:

1. It is a comparatively rare oc-

currence for actual insanity to develop during the course of bodily disease.

2. In general hospitals mental disease most commonly occurs after fevers, poisons, injuries, operations and heart disease (in about this order of frequency).

3. In the early stages of fevers and after injuries and operations, mania is the commonest form of insanity, but in other conditions depression is more common; but the commonest form is an insanity with marked delusions of persecution (often associated with hallucinations of hearing), such as one sees in phthisis and heart disease, and after typhoid fever.

4. There is no form of insanity connected with special bodily disease, so that it is impossible to diagnose the bodily disease from the mental symptoms present (except the peculiar state of alcoholic paralysis).

5. Insanity occurs with unusual frequency in bodily disease associated with peripheral neuritis, as poisoning by alcohol, carbon bisulphide and lead; pellagra, typhoid, typhus, scarlet and rheumatic fevers, influenza, pneumonia, phthisis, syphilis, septicemia, rheumatism, gout and diabetes. It is possible that in these conditions the factor which causes the changes in the peripheral nerves causes also similar changes in the multitudinous internuncial fibres in the brain and so produces disturbances in the normal cerebral reactions which go to make up a healthy mind?

6. When the cause is not continuous—such as the poisons, the fevers and the traumata—the mental symptoms in the great majority of cases disappear; in heart disease and phthisis they may disappear and reappear from time to time, but in some cases, such as insanity connected with gouty kidney, they only disappear with death.

THE QUICK FILTRATION OF URINE.

For a very long time, says a writer in the Boston Medical and Surgical Journal, it has been a problem to know how, with the apparatus usually at hand, to obtain quickly and easily a small quantity of clear urine from a cloudy specimen in order to make the usual test for albumen.

The following plan, which has proved extremely easy and satisfactory in my own case, will, I think, be found equally so in the hands of others. A small quantity of the cloudy urine is placed in a test tube, and the mouth of the tube plugged with cotton to a moderate degre of firmness. A second test tube is placed with its mouth to the first. The position of the tubes is now reversed so that the one with the urine is bottom upward. The upper tube is now carefully and gently heated over the flame of a Bunsen burner or an alcohol flame, and the expansion of the air above the urine immediately forces it through the cotton plug, and the filtered urine collects in the lower tube. In this way we imitate to a degree the rapid filtering apparatus of laboratories, but use pressure above the fluid to be filtered, instead of an air-exhaust below.

AMMONOL.

This new drug is a combination of phenylacetamide (acetanilid or antifebrin) with carbonate of ammonia, and it is claimed for it that the tendency to depression produced by coal tar products is thereby obviated. Five to twenty grains may be given as a dose, but it has not been found necessary to give more than a drachm in the twenty-four hours. It may be used with pulv. ipecac. co. for aborting a threatened cold, or as an expectorant mixture, with caffeine in migraine, and for the after-effects of narcotics and alcoholic stimulants. It is indicated in fevers, catarrhal influenza, neuralgias, gastralgia, atonic dyspepsia, pneumonia, bronchitis, rheumatism, dysmenorrhea, uterine and intestinal colic, and catarrh of the bile ducts. It occurs in amorphous crystals having a pale yellowish color, is strongly alkaline in reaction, and has an ammoniacal taste and odor.—London Med. Times.

Miscellany

—Dr. Welch, the bacteriologist for Johns Hopkins Hospital, has demonstrated that germs will not grow in the immediate vicinity of silver. His discovery is made use of in the dressing of aseptic surgical wounds, by placing silver foil immediately in contact with the closed incision in sheets about four inches square. The other aseptic dressings are then applied.

—William Lester, a Philadelphia editor, can write with both hands at the same time, and, more than that, can write in this way two entirely different paragraphs on entirely different subjects.

—Says the Journal de Medicine de Paris: "We have serious reasons for believing that adhesion to exclusive bacillary pathology does not obtain better results than clinical medicine in the great majority of cases, and, moreover, compromises the constitutions of our patients."—N. Y. Med. Times.

—The Archives of Pedriatics will hereafter be published under the management of E. B. Treat, the medical book publisher. The editorial management will be in the hands of Floyd M. Crandall, M. D., Adjunct Professor of Pedriatics, New York Polyclinic. The journal will be enlarged, with adidtional collaborators in its different departments.

—Rosenbury advises before administering chloroform spraying the nose with cocaine solution. By this means the reflex action of the heart is prevented and anesthesia more readily produced.

—Balfour says all weak hearts should have their principal meal in the middle of the day, and with as little fluid as possible.

ACETANALID.

Dr. Morton finds this remedy a specific in simple chancroids, the sore healing in from one to seven days. The sore is to be washed several times a day, and dusted with the powder.

MEDICAL EXCURSION TO BERMUDA.

Dr. J. B. Mattison, of Brooklyn, is arranging another excursion of doctors to Bermuda, sailing on December 12 and returning January 2 or 13. Specially low cost for a delightful winter outing. Details on request.

From the Rivista d'Igiene e Sanita Publica, a newsy little Roman medical journal, we cull the following:

Notice—The subscribers to the Rivista d'Igiene e Sanita Publica, who have not yet paid their subscription for the year 1895, are incessantly urged to settle with the publisher, so as not to have the paper stopped and their respectable names published in the Rivista among the delinquents.

L'Amministrazione.

If American publishers should try this wouldn't there be a circus?

A lady from the far West, who had just been through a course of typhoid treatment with enemato en masse said while speaking of her experience: "I don't know much about different kinds of doctoring, but I must say I prefer quartz to placer mining."

In regard to the immunizing effects during the epidemics of diphtheria in institutions, some very interesting papers have ben read before the "American Pediatric Society," at its seventh annual meeting at the Virginia Hot Springs, May 27, 1895, by Dr. L. Emmett Holt and Dr. A. Seibert, of New York, and Dr. F. Gordon Morrill, of Boston.

These well-known specialists of children's diseases showed in their reports, which were published in the "Archives of Pediatrics," July, 1895, that injections of antitoxin for im-

munizing purposes are of inestimable value. Dr. Morrill described the results obtained from 438 immunizing injections of antitoxin at the Children's Hospital in Boston, of which 109 were of Gibier's serum; 104 of Behring's; 74 of Aronson's, and 151 of the antitoxin prepared by the Massachusetts State Board of Health. As regards the urticaria, its frequency, severity, time of appearance, and duration varied greatly with the brand of serum employed. That of Gibier (Pasteur Institute, of New York) produced it in 22 per cent. of the cases on the (average) seventh day, and lasting (average) two and a half days. Behring's caused it in but one case, appearing on the eighth day and lasting three days. Aronson's gave rise to no urticaria. The serum of the Massachusetts State Board of Health produced in about 4 1-2 per cent. of the cases, an eruption appearing on the (average) second day, and disappearing in a day and a half.

Wayside Notes.

By ERNEST B. SANGREE, A. M., M. D.

One who has a weakness for autopsies finds good cause for envy in witnessing the Germans at this somewhat disagreeable branch of medical science. At our city hospitals and colleges the getting of a "post" is something of an event, while even at Blockley occasionally days will elapse before anyone has succeeded in wheedling the friends or relatives into allowing a section to be made on one of the city's pauper dead. It is often very hard even to secure permission to make an autopsy on the body of the friendless dead, whose remains will soon grace the dissecting table or the potter's field. And when the autopsy is finally made, it must be done with such delicacy that the body will look better, if possible, after the operation than before. In other words not the slightest mutilation is permitted, or the pathologist's official head would drop into a figurative basket. How is it in Deutschland?

While I was in Berlin this summer we had at the city hospital, corresponding with Blockley, from three to ten autopsies every day. From what I could gather, the pathologist has free sway over the inmates of the dead house, and few get away without leaving a complete set of internal organs for demonstration to the students. Here many hours must elapse before an autopsy dare be made; there I saw warm bodies on the table at 10 o'clock that had died at 6 or 8 that morning. In some cases I asked: "Had this person any friends?" The answer would be "we do not know." But the section would go on.

Every person that dies inside the hospital grounds comes under the pathologist's knife. Here cases of suspicious death, suicide and its like go to the Coroner's physician, who usually has neither the time nor the ability to apply himself to the scientific side of the question. Over there the pathologist makes all such autopsies and greatly enriches his museum thereby. I have no hesitation in saying that one can see in Berlin in one month more of pathological interest than can be seen in one year in any city in the United States.

Books Received.

PERSONAL SERVICE AS THE ESPECIAL EXPONENT OF A GREAT PROFESSION. By Henry O. Marcy.

THE SURGICAL TCHNIQUE OF ASEPTIC WOUNDS. By Henry O. Marcy.

SANITATION in STREET PAVEMENT. By Henry O. Marcy.

CLINICAL NOTES ON PSORIASIS, WITH ESPECIAL REFERENCE TO ITS PROGNOSIS AND TREATMENT. By L. Duncan Buckley, A. M., M. D. Reprinted from the Transactions of the Medical Society of the State of New York, 1895.

ROYAL COLLEGE OF SURGEONS OF ENGLAND
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The Times and Register.

Vol. XXX. No. 22. Philadelphia, November 30, 1895. Whole No. 899.

Original.

A PRACTICAL STUDY OF THE BLOOD AND THE CIRCULATION, WITH A HISTORICAL REVIEW OF THE SUBJECT AND ITS BRIEF CONSIDERATION FROM THE STANDPOINT OF ITS CHEMICAL COMPOSITION, ANATOMICAL STRUCTURE, AND PHYSIOLOGY; INCLUDING CLINICAL STUDIES, AND EXPERIMENTAL RESEARCH ON THE LOWER ANIMAL.

BY THOMAS H. MANLEY, M. D., NEW YORK.

Continued from last number.

PART XI.

THE INTERMEDIATE CAPILLARIES.

The capillary areas are the centres of active, chemical changes, protoplasmic transformation, and new forces. It is therefore rational to assume that the minute channels possess special endowments of their own. It might be supposed that by this time, with large extension of laboratory work in all of our great medical centres, and in any part of the civilized world, we should have attained to something like definite knowledge, on their structure and functions and, without doubt, the movement is in that direction; though it is retarded, through a servile submission to what is known as authority. Not only individual medical schools, but even whole nations are often swayed by the dictum of one great, original investigator. As great or even greater from time to time spring up and expose the defects of the Francis premises, or, the fallacies of his conclusions; but in the din of the multitude or through want in his profession of what the politician would call "pull," his temerity for even hinting at the possibility of error having been committed, he is pushed aside, or denounced for his pains. It is only as time, which is a great healer, moves from the active stage of labor the providers of new theories and doctrines that new facts are forced forward and more antiquated views are relegated to past history.

No one seriously questioned Virchow's conclusions on cell anatomy, or cellular proliferation, while he was in the fullness of his powers, but as the younger column moved forward he was forced to move aside and make way for it; this we find Carl Heitzman deny and demonstrate the existence of such a thing in nature as independent cell entity; or Cohnheim call in question Virchow's views on cell proliferation in neoplastic growths. And so, in the near past, to neglect Lister's antiseptic precautions in wound-treatment was regarded as little less than criminal; but time and again the irrefutable arguments and clinical proofs of a few fearless spirits proved that this theory rested on a fallacious basis; and it now has no place, except from its histological interest.

Now that Pasteur has passed from the theatre of life and respect for the great savant's feelings has held back later views forged in fresh crucibles, it remains to be seen what role Bechamp's remarkable investigations on the microzyme will play on the further study of morphology as applied to bacteriology.

What has been said in the foregoing equally applies to the capillary circulation, with the only difference that this is practically a new field. The fullest, the most complete and best illustrated work on the minute vascular elements is without question Sappey's. Yet, many things which he sets forth as facts in this connection to-day will carry little weight, and have indeed been so many times controverted as to be practically obsolete.

It is of great pathological importance, for example, to know whether or not the capillaries have direct relation with the lymphatics; this distinguished investigator denied that there is. His drawings point to a racamose, arborescent arrangement of the primary lymphatic canaliculi. While many of our latest and best recognized authorities on histology claim that the origin of this system of vessels is unknown, and further tell us that the corpuscular elements of the blood may pass directly into them. It certainly is time that both the white and red blood corpuscles may be found in either the right or left thoracic-duct, before this empties into the subclavian vein. Sappey also not only denied that the lymph vessels drained directly into the serous-cavities, as the peritoneum or the pleura, through the stomata of the endothelia, but went further and alleged that there were no lymphatics at all in serous membranes.

With the diversity of opinion on the lymph vessels it is evident that little is yet settled on the precise functions of the capillaries. However we may view the subject there is one thing in which there must be a general accord, viz.: nothing approaching even a rudimentary knowledge of them can be derived from a study of them except in the living body. By the employment of the lens over the moving currents, Malpighi, in the eighteenth century, first studied their general characters. By any other means on dead tissues, however prepared, studies on them must inevitably lead to misinterpretation and errors.

And even life, without corpuscular movement within them, an analysis of the varied phenomena which they present would be quite impossible.

In fact the elements of the blood and capillary protoplasm are so commingled and mutually dependent on each other that when we come to study the minute elements and functions of one, both must be considered together.

CONSTRUCTION OF THE CAPILLARIES.

In the arteries we have succeeding each systole of the left ventricle a sudden distention of them, which may be distinctly seen and felt in the larger vessels. As this impulse is transmitted into the arterioles we may yet perceive it, but as the primary capillaries are reached, and the vis a tergo impulse is broken by the current being divided into an almost numberless series of capillaries, taking different directions and freely communicating wth each other, this is greatly enfeebled or entirely lost.

In the normal state, in the peripheral capillaries, the motion of the blood is continuous, steady and regular. In the lung, which is the most vascular organ of the body, rhythm disappears before the corpuscles have penetrated the walls of the alveolar of the air vessels; if they be quickly exposed in a warm room for a few moments, in many of the primary and intermediate sets, we will observe a contraction or thrill in the walls of the vessels, which is synchronous with that of the arteries.

This interrupted movement in those situations presents many curious and remarkable features. In the arterioles and the primary larger capillaries, simultaneously with the successive charges of corpuscles sent into the bore of the vessels we will see their double-contoured mural borders rise and enlarge, to contract and narrow again in the interval. In the meantime we will observe that, though intermission of movement in the capillary is distinct, the current is continuous. Intermittent compression only moderately accelerates it.

But it is in the finer terminals that the singular phenomena appear. Here we will note that after each im-

pulse sending the blood forward, in most of the vessels there is a rebound, or a recession of the corpuscles backward.

If we examine the field early after exposure we can see plainly that, although there is a back current after each impulse, still the gain is in the direction of forward advance. But after a time we see that the propulsive force is weakening, and that each impulse is less energeic, and that the retreat of the advancing corpuscles, or the resistance of those already filling the distal vessels, is the greatest. A whole column will rush backward, and for a second or two there is perfect stasis, when those motionless corpuscles or the faltering vessel has received a fresh impulse and it is pushed forward. But, after a while the whole circulatory system seems to weaken, and this phenomenon is finally extended to all the capillaries; in one distinct stasis being complete; in another only irregular, spasmodic movements of the corpuscles is seen, while in others again we will note that though the capillary seems paralyzed and powerless, the blood corpuscles are rapidly diverting the former abode and everywhere escaping through the walls into the lymph stream. I have, however, several times observed that after every corpuscle except the white ones were motionless, and all capillary action, in abeyance to the vessels would once more recover the wanted energy and send their occupants, the corpuscles, along again at a lively pace. In all the smaller capillaries in these tissues, though intermission of motion is pronounced under certain circumstances. there was no evidence that the capillaries contracted. In all my observations on these finer vessels, in the normal state, I could not perceive that they ever intermittently contracted. In the mesentery wherein the panorama of corpuscular action may be witnessed as through the most transparent glass, it is difficult to say, definitely, whether the capillaries as we find them are dilated or not; or whether they are not normally very much larger than those in other situations.

It is plainly evident that the bore of the vessels is much larger than the tongue or webbing of the foot, inasmuch as the corpuscles are so relieved of compression that we see them nearly as large as when removed from the body. But is this physiological or pathological? Perhaps, it may be answered, that with the faculties now at our command to determine this question there should be no reason for dispute on this point.

We will note the same phenomenon in the lungs.

It is my conviction that this apparent enlargement of the capillaries is pathological. For three reasons: First, because if we hurriedly examine the mesentery, taking care not to mutilate it, the movement in all the capillaries is so rapid that a study of their isolated contents is impossible, but in a little while, as the effects of exposure are more evident, as the whole membrane becomes more turgid and congested, motion begins to slacken, the vaso-motor nerves become paralyzed, their inhibitory action ceases and the vessels voidly dilate, exactly as muscle tissues relax.

When we open the peritoneum of an animal the mesenteric vessels are mostly of a bright scarlet color and we feel the regular, steady throb of the arteries; but if we are tedious in one manipulation within it we soon note that arteries and veins alike are of a deep blue hue; they are widely dilated; the pulsations in the arteries are quickened, enfeebled and irregular, and there is a condition of shock present. Under these circumstances it is but rational to assume that the capillaries, in common with all the other vessels, spread widely and cease resistance against the corpuscles.

The pulmonary current moves with almost lightning rapidity in the capillaries. But after the pleural cavity is opened and an extensive area of the lung is exposed, it is amazing how speedily the rushing torrent moderates, and the onward, flash-like movement of the corpuscles has been transformed into a languid, irregular pace. Shock likewise acts, for which the surgeon has a most re-

spectful dread when he essays operation on the pulmonary organs. But cannot the question be definitely determined by post-mortem injection into the vascular system? Mechanical distension of the finer capillaries, in dead tissues, with staining fluids is not very satisfactory in results. The exquisitely delicate bore through a mass of protoplasm has parted with all its vital characters, from which it derives nearly all its interest and importance.

Most of the staining fluids act as astringents on capillary walls, or, if suddenly injected, hurt them. In any event, they will filter into and color the histological elements, of other elements lying close by and so blur the field as to render the outline of the capillary very indistinct. It would seem, however, from various surface studyings of the integument, under the influence of emotion or low temperature, that all the capillaries are capable of dilatation and contraction.

As we observe the capillaries in the living animal we can everywhere see that they are not packed with corpuscles when the circulation is free and unrestricted; but if we place a circular compress around the limb, then, though all the vessels are quickly crowded with corpuscles, there is no apparent enlargement of the calibre of the finer vessels, from which it must be concluded that as far as the skeletal terminal corpuscles are concerned, in health they are not capable of dilation, although they are certainly not devoid of motion.

In flushing and when the hands are crimson from cold it is probable that the high color succeeds from the capillaries being engorged with blood; their lumina being filled with corpuscles, and there being an escape of hemoglobuli into reta-mucosum and the septum-lucidum. But this is scarcely a physiological process, for we sometimes find the blush on the cheeks distinctly marked in certain individuals after death.

(To be Continued.)

STUDY OF THE ANTISEPTIC TREATMENT OF CYSTITIS.

The September number of Revue Medicale contains an excellent article on the above subject by Dr. Danois, who states that anatomically and clinically we recognize two principal sites for the lodgment of gonorrhea in the male, viz.: the urethra, the bladder and probably the pelvis of the kidney.

It is true that we may find gonorrhea in some instances quite definitely restricted to either the urethra, the bladder or the ureters.

The infection of gonorrhea is generally of the ascending type, thus beginning in the urethra, provoking an ultimate cystitis, and in serious cases giving rise to a pyelitis. Descending infection, as from the kidney to the bladder, is unusual.

Gonorrhea threatens life when the infection is of an intense type, and the diffusion through the kidney is general, when grave nephritic inflamation leads to urinary suppression, uremia and death.

Recognizing, then, that internal gonorrhea is beyond the reach of local indication, and that the general system is involved, it is evident that systemic remedies must be always employed in complicated cases. When we have an interstitial pus formation of the kidney, the so-called "surgical-kidney," we may now, thanks to advances in surgery, make an incisica, do a nephrectomy, a nephrotomy or nephrostomy.

Treatment of gonorrheal inflamation of the genital tract will generally succeed, when entirely directed internally, associated with a severe dietic and hygienic regimen, and hence it is only in those types of unusual intensity, chronic or rebellious, that we must have recourse to local treatment.

Our aim in all cases, however, must be to thoroughly disinfect the diseased areas, and sweep away the residue of inflammation, to accomplish which we will address our remedies indirectly through the circulation or directly to the seat of lesion.

INTERNAL ANTISEPTIC MEDICATION.

We give medicines by the mouth, which are eliminated by the urine, and possess antiseptic qualities. But if the exact knowledge of the manner in which these act is new their administration certainly is not, for they have been—most of them—highly valued for this special property for a long time. In the balsams we show there reside antiseptic elements of great energy. If we examine the infected urine before we administer a balsam we will note great bacterial activity, but, some hours later, after the urine becomes saturated with the drug, the number of microbes has greatly diminished, and many are defunct. Under the influence of the balsams the pain and strangling quickly subside, micturition becomes easy and the urine flows in a full stream, the urethral symptoms soon disappearing.

But in many cases while the descending antiseptic urine sometimes wholly destroys all the cystic microbes, in some the effect is only transient, the medicament is too much attenuated before the urine which conveys it flushes the vessical mucosa and, as a consequence, possibly a chronic cystitis remains, to be remedied possibly only by antiseptics directly applied to the seat of disease through external agencies. The diluted antiseptic in many only imparts germ action, though inducing a state of temporary torpor, which in time passes off and leaves a fresh recrudescence of the malady.

The bactericidal properties of the balsamic urine in many are not amply energetic. The medicament is caught up by the general circulation and rushed to the glands and connectories, and there reduced or destroyed, so that none is carried down through the kidneys except the excess, which always endangers the secretory structures of the kidney by its irritating properties. Let it be known that all balsams in large doses disturb digestion, provoke diarrhea or occasion nephritis, with free albuminuria.

But if the balsams are not in general curative agents they are, nevertheless, highly useful, not only because they modify symptoms, but because given in association with local treatment they are invaluable in certain cases. Indeed, many types of mild cystitis, with the aid of Nature, yield to those remedies alone.

Any of the balsams may be employed, although it is a matter of common observation that certain process of rebelious gonorrhea, which will resist one of them, will quickly yield to the other.

The balsam of copaiba, from eight to ten grammes a day, combined with double this quantity of powdered cubebs, has a high reputation with many clinicians; its great forte is blenorrhagic cystitis. But the stomach tolerates it badly, besides the exhalation from the respiration is offensive.

In simple cystitis turpentine, in the estimation of many, is invaluable and enjoys a high reputation. Its dosage must be moderate—about 15 (*) grammes a day. It may be given in capsules, but among the poor an emulsion is available.

Santal Wood Oil.—For some years this material has dethroned all the older balsamic remedies, and especially turpentine. It not only excites less repugnance but it is better borne by the digestive organs besides, it is more efficient; from laboratory experiment it may be said to communicate to the urine with more energy its antiseptic properties than any other balsam. It is also longer and better tolerated by the system.

Salol is a combination of phenol and salicylic acid. In elimination it is decomposed, and as it is thrown off by the urine it permeates deeply into the vessical mucosum, displacing those residual products on which microbes best thrive, and in this manner is an indirect antiseptic. This drug, perhaps, is more efficient as an antiseptic than the balsams, but it is more dangerous from its action on the kidneys, and hence must be employed with discretion. It is in some cases very prompt in action, but in general cannot take the place of the

*A gramme equals 15 grains.

balsams. The minimum dose is four grammes a day; the maximum, eight.

Boracic acid, borate of soda, benzoate of soda and methylene-blue have each been lately extolled as specifics in cystitis, but the latter posseses dangerous toxic properties, and the former are uncertain in action.

(Concluded in next issue).

THE RADICAL CURE OF ABDOMINAL HERNIA.—DR. E. KUMMER.

(Continued.)

We now recognize two causes of hernia—the diminution of the resistance of the abdominal walls and the augmentation of the intra-abdominal pressure. The first of these two causes only can be modified by operating, for upon the solidity of the region about the track of the hernia will depend the value of our sutures. Intra-abdominal pressure, on the contrary, instead of being diminished by the radical cure, tends rather to increase upon the return of the prolapsed viscera into the abdominal cavity. On the other hand, the operation can do nothing against the exaggerations of abdominal pressure, which constitute in certain trades a permanent menace to the integrity of the abdominal wall, so that a hernia may come on in spite of suitable precautionary measures.

These considerations, which in certain respects tend rather to diminish the value of the operative cure for hernia, will preserve us from disillusions and discouragement in regard to certain operative checks, and if, in spite of the insufficiency of our powers of defense against hernia, we can obtain definite cures in a great majority of cases, we shall feel at liberty to draw the conclusion that we are on the right track.

On the other hand, after operating we shall not forget to insist that the patient observe various precautionary measures, which, naturally, will vary in different cases.

In entering upon the statistics of the radical cure of hernia we will say immediately that we renounce the idea of uniting in one single table the figures given in the different accessible works on the subject. We believe that this method of procedure tends to confound unlike and incomparable things and leads to false conclusions.

For that reason we prefer to give separately the results obtained by some of the most skillful operators. In speaking of hernial relapse, with the restrictions mentioned above, it seems plausible to admit that, as a general rule, the relapse is the product of an insufficient operation. As regards this point it is interesting to separate the relapses of the first year from those coming later. Thus, among 41 relapses in 105 cases of hernia operated upon by Professor Socin some time ago, 28 came in the year following the operation, and it is interesting to note that Socin did not then employ the suture of the hernial passage.

On 275 operations mentioned by Lucas Championniere, eight of the 17 relapses came in the first twelvemonth, and nine later. If, as we assume, the relapses of the first year are the results of an insufficient operation, we find here a great improvement over the results obtained by Socin. Championniere attributes a great importance to suturing the hernial passage as well as to the total extirpation of the sack and its neck.

The most encouraging statistics we have seen are those of Kocher. In 152 cases operated upon the celebrated Bernese surgeon had but two relapses the first year.

Kocher gives especial attention to the suppression of the peritoneal funnel and to the suturing of the hernial track.

In the 17 cases of relapse mentioned in Kocher's latest work there had been 14 cures by first intention and three cases of infection of the wound. In the cases of definite cure of the hernia the number of infections has been considerably more.

Lucas Championniere only had two cases of suppuration in 17 relapses.

The simple fact of the suppuration of the wound does not, then, seem to exert as unfavorable an influence on the final result of the operation as might at first be supposed.

The most advantageous kind of hernia for operating to obtain per-

manent cures are the direct inguinal in women and the unbilical and epigastric varieties, for here nothing prevents the suppression of the peritoneal infundibulum nor the complete closure of the hernial track. Crural hernia, which at the first glance appears to offer equally favorable conditions for the closure of the hernial track, presents, nevertheless, certain difficulties caused either by the neck of the hernial sack being placed very high, or the presence of the femoral vein preventing a thorough constriction of the opening. It is very encouraging to note that, thanks to the improvement in methods of operating, the variety of hernia which a priori seems to offer the least chance of radical cure, inguinal hernia in the male presents an ever-increasing number of successful operations. In spite of the presence of the spermatic cord, which prevents the complete obliteration of the canal, the results of operative cures of inguinal hernias are most brilliant. As regards the length of time necessary for the healing of the wound, this depends upon its sterility and the general health of the patient.

Macewen requires the patient to remain in bed for six weeks and to refrain from work for two months.

Kocher, on the contrary, requires only seven to eight days in bed in those patients whose wounds close by first intention, after which they may get up and soon go to work. In case of suppuration the cure needs 23 days on an average, and, according to these figures, the average is much less than Macewen requires.

THE MORTALITY OF THE OPERATIVE CURE OF HERNIA.

Without losing time discussing the opinions of the older surgeons, who considered this operation as inevitably fatal, we willingly admit that the operation for hernia still has some danger for the patient's life.

The percentage of deaths, as given by the different surgeons, is as follows:

Leisrink, 5.9 per cent. in 202 operations.

Anderegg, 5.1 per cent. in 273 operations.

Stensson and Erdman, one death in 106 operations; acute enteritis and nephritis.

Macewen, in 98 operations, one death; scarlatina.

Bassini, in 250 operations, one death, pneumonia, which came on when the wound was already healed.

Kocher, in 119 operations, one death; pulmonary embolism, 15 days after the operation.

Lucas Championniere, two deaths in 266 operations.

Kocher-Beresowsky, in 192 patients, with 220 operations, and not one fatal case.

We will not pretend that the operation has lost all the elements of danger, but we do pretend that in the hands of a competent surgeon the danger is reduced to a minimum. In short, all danger can be referred to three principal sources: Sepsis and intestinal and pulmonary complications.

OPERATIVE MEASURES.

Every good operative measure for the radical cure of hernia must fulfill certain conditions, namely: Reduction of all the prolapsed viscera and definite closure of the peritoneal opening and of the hernial track.

1—Reduction of the prolapsed viscera.

An empty hernial sac presents ordinarily only few difficulties, and the dangers of hernia come chiefly from the prolapsed viscera, which, by their weight, tend to augment continually its volume and to draw other viscera into the hernial sac.

The reduction, then, of the contents of the sac is the first step to be taken.

This is difficult only in those cases where the viscera are attached to the wall of the sac by fibrous bands. The resection of the epiploon adherent to the sac is then necessary.

This is a delicate but rarely impossible operation. Intestinal adhesions, rarer than those of the omentum, must be carefully detached, or where this is found to be impossible, returned into the belly with a portion of the hernial sac; exceptionally we may be obliged to make a resection of the intestines.

2—Closure of the peritoneal opening.

It is well to recall the fact that

the parietal peritoneum in descending toward the neck of the hernial sac forms a funnel which becomes a bait for a fresh hernia whenever it is not removed by operation.

The complete extirpation of the hernial sac will precede or follow the excision of the neck of the sac, as circumstances may dictate. In congenital hernias one must preserve, nevertheless, a portion of the peritoneal sac to make a tunic for the testicle.

3—Closure of the hernial track.

The name of hernial track is here given to the opening in the abdominal wall which allows the passage of the hernial sac, and it is only since we have known how to close this opening solidly that the operative cure for hernia has become a radical one.

To obtain a good result the simple suturing of the inguinal pillars is not sufficient, for these represent only one of the openings of the hernial track, and in suturing them we preserve the canal itself as well as its internal orifice. Sutures of the pillars are never firm, for, besides being composed of a fibrous tissue unfit for solid cicatrization, they also present a divergent direction and so oppose a very appreciable resistance to union by sutures which likewise tend to cut the tissue.

The suturing of the whole hernial canal is necessary, and great pains must be taken to do this carefully, thoroughly and aseptically. The presence of the spermatic cord in the male renders the obliteration of the hernial track extremely delicate, and in rare cases where the radical cure is the prime consideration, it may be necessary to remove the testicle. Various methods of closing the canal without cutting off the spermatic cord have been devised. R. Frank, of Vienna, recommends the gouging out of a canal in the os pubis. Lauenstein pushes testicle and cord up into the abdominal cavity and closes the inguinal canal completely. The immediate result of this operation has thus far been favorable.

The complete obliteration of inguinal hernia in the female presents no difficulties. To unite by a solid suture the walls of the inguinal canal, it is advantageous after its incision to dislodge the round ligament, with its vessels, nerves and cellular atmosphere. The ligament should be sutured to the superior border of the wound by its resected extermity.

For oblique inguinal hernia, previous incision of the inguinal canal is necessary. When an umbilical hernia is very voluminous the borders of the recti are widely separated, and to close them without tension they must be previously freed; this being usually the longest part of the operation.

Suture of the hernial track meets with serious difficulties in the case of crural hernia, for here the canal is made up of rigid tissue difficult to render movable or to unite, and some surgeons do not even attempt to operate. In our own operations we have habitually sutured Poupart's ligament to the pectineal fascia and to the vascular sheath. Occasionally, when the tension seemed too strong, we have loosened (debride) Poupart's ligament by one or several little incisions.

(Here follows a table of the results of the author's operations: In 49 cases of strangulated hernia of all varieties he obtained 48 cures, 38 healing by first intention, 10 by granulation and suppuration, and one case of relapse.)

The cutaneous sutures and the dressings are to be made according to the ordinary rules of general surgery. It is of importance to have a movable cutaneous cicatrix, so as not to compromise the solidity of the deep cicatrix by dragging on it.

The fresh hernial scar requires care, more than is given to cicatrices in other parts of the body. On account of circumstances many patients undertake fatiguing work much sooner than strict prudence should allow. These should wear a temporary hypogastric bandage destined to overcome the effects of abdominal pressure.—Revue Medic. de la Suisse Romande.

Society Reports.

GYNECOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE.

Seventy-fourth Regular Meeting.

The following officers were elected for the ensuing year: Dr. William S. Gardner, president; Dr. J. Edwin Michael, first vice president; Dr. William P. Chunn, second vice president; Dr. J. Mason Hundley, secretary; Dr. James M. Craighill, treasurer.

Dr. John Neff read the histories of the two following cases of septic infection before abortion:

On the morning of the 9th of April, 1894, she noticed some slight hemorrhage and pain, which became persistent and frequent during the day. At midnight she had a prolonged chill, followed by high fever and profuse perspiration. When I saw her early the next morning her temperature was 104 degrees, pulse 130. On digital examination I found the os resistant and only slightly pervious, hemorrhage slight and pain trifling and frequent. Thinking the abortion might be prevented, as it had not been criminally induced, I enjoined absolute rest and gave anodynes. At my next morning visit the temperature was still 104 degrees and pulse 130; frequent chills had occurred during the night, and now the miscarriage was inevitable, the fetal portion having passed during the night. The os was now patulous and easily dilatable, and the dull curette was used to remove the remaining portions. Intra-uterine douche of permanganate of potash five grs. to ounce followed by copious use of sterilized water. Thus within a brief time after inception of abortion the uterine cavity was emptied of its contents, which were more healthful; was antiseptically treated, the temperature remained high, the irregular chills were frequent. During the night arthritic trouble developed in the right shoulder and left knee, the joints became swollen, sensitive and painful. Effusion rapidly took place in knee joint, distending the joint more and more each day. The fluctuation seemed to indicate a fluid that was purulent in character, if not already pus. Aspiration was decided upon on the 17th, and employed, taking from the part ten ounces of seropurulent fluid, which undoubtedly would have become pus if allowed to remain and proven destructive to tissues of the joint. No more rigors occurred and the pulse fell to 96 and the temperature to 100 degrees, within a few hours after the operation. The joint did not refill, but motion was impaired for several weeks, and four months elapsed before normal restoration occurred. No effusion took place in the shoulder joint, but the arm was painful and its use impaired for two months.

The effusion in knee joint was doubtless of septic origin, as it began almost simultaneously with inception of the miscarriage. There was slight tenderness in pelvic region, but no distension of abdomen or peritoneal investment.

The treatment was sulphide of calcium, grs. three, every four hours, alternated with salicylate of quinine, grs. five. Full nourishment and moderate stimulation. Hypodermics of morphia to allay pain of joints.

The other case was Mrs. C., aged 26, mother of two children; youngest 18 months old. Had missed two monthly periods, and on December 21, the date for its usual return, she noticed slight hemorrhage and irregular pains. In this condition she took a long shopping jaunt that afternoon and evening; the weather was intensely cold. After retiring she was seized with a prolonged chill, which repeated itself a second time, followed by fever and profuse perspiration. When I saw her in the morning I found her temperature 105 degrees, pulse 130. The hemorrhage was still slight, and uterine pains infrequent and short. The os being impervious, the miscarriage did not seem imminent. During the next twenty-four hours the irregular chills and high temperature were maintained, and the abortion now seemed inevitable, some fragmental tissue having passed, and the pain and hemorrhage increasing. The abdominal tenderness was now marked, and es-

pecially in the right ovarian region was tense and most sensitive. It now seemed impossible to prevent the abortion, and I dilated and removed the contents, which showed no putrefactive change. Employed intrauterine injections of hot carbolized water. The lochia continued natural and inoffensive, still antiseptic vaginal douches were employed daily.

The second day she complained of pain in her right hip joint and I readily recognized the beginning of arthritic trouble, that existed in the previous case just reported. The pelvic tenderness continued; by palpation I detected enlargement and filtration of the right ovary and tubes. The temperature, even with large doses of quinine and antifebrine, continued high, ranging from 103 degrees, A. M., to 105 degrees P. M.

The arthritis lasted three weeks in the acute form, and impaired the use of the joint two months. The pelvic tenderness and infiltration subsided with the acute arthritic symptoms and tedious convalescence began. The treatment employed was large doses of sulphide of calcium and salicylate of quinine alternating with salicine and cold water bag on groin and hip, when the temperature was highest. Gave nourishing diet and mild stimulation; hypodermic injections of morphia to alleviate arthritic pain and to induce sleep.

Dr. William P. Chunn: I do not remember to have seen a case where sepsis made its appearance before abortion. The arthritis in Dr. Neff's case was unusual. In a case recently seen the first symptom of trouble after the abortion was high temperature.

Dr. James M. Craighill: I find that the early miscarriages are the ones that give the most trouble. Many times I am in doubt what to do with these cases.

Dr. T. A. Ashby: I am inclined to think that the case of arthritis was not sepsis. In all cases where the uterus is not completely emptied I think there is but one thing to do—dilate and curette. I have curetted many such cases and have had no trouble from it.

Dr. William E. Moseley: After many cases of abortion there will be a chill and fever that has no relation to the abortion. After abdominal operation there may be a phlebitis that is not associated with any local infection. We also often have a malarial infection. Use the finger if possible in emptying the uterus, because when the finger can be gotten inside the uterus a much more intelligent idea of the condition of the cavity can be formed. When this cannot be done, dilate with parallel bars and curette.

Dr. William S. Gardner: The case of arthritis related by Dr. Neff of course might have been due to some other cause than sepsis, but associated as it was with the abortion and the general condition of the patient, I think that it is highly probable that it was just such a joint infection as is seen in pyomia. I have seen just such a case, where not only the knees, but other joints were involved. I do not agree with the opinion that we ever have phlebitis after labor or after abortion, that is not associated with a local infection. I believe not only that we always have an infection, but also that the infection takes place at the time of operation or labor, though it may not develop to a marked extent until several days have elapsed. I have never seen a case of this kind in which the patient had a perfectly normal temperature for twenty-four consecutive hours, between the labor or operation and outbreak of the septic attack.

Dr. William S. Gardner read the following paper:

"THE LESIONS ASSOCIATED WITH DYSMENORRHEA.

It has been long recognized that painful menstruation is associated with, if not due to, some pathological condition usually of such character that it can be readily recognized and often corrected. There is a limited number of cases where no gross lesion can be detected. And even when there occurs a gross lesion of the internal organs of generation it does not necessarily follow that the dysmenorrhea is due to the lesion or that the curing of such a

lesion as is found will necessarily relieve the painful menses.

But from a careful clinical study of the lesions found associated with painful menstruation, we will learn more about the direct causal relations between the lesions and the pain, and consequently learn more about the relief of this trouble, which not only makes many a woman uncomfortable, but unfits her for duty during from 10 per cent. to 25 per cent. of the active period of her life.

I have taken 120 cases that have complained of painful menstruation and have attempted to classify them according to what appeared to be the most important lesion detected. Among the 120 were eight nulliparae, who, on account of an intact hymen on the presumption of its presence were not examined digitally; this leaves 112 who were examined.

One of the most striking points noted is the very large number of sterile women, 44, or a fraction less than 40 per cent. belong to this class. Of those who had been pregnant, 12, or over 10 per cent., had never had a child at full term; 15 more, or 13 per cent. had had a miscarriage since the last full term child was born, leaving less than 37 per cent. of the total number whose last pregnancy had come to full term. Without further examination these figures would indicate that in a large proportion of patients suffering from dysmenorrhea there were present lesions which also interfered with conception.

A detailed account of all these cases named would be very tedious, and I will give the list of lesions found and then make some comments upon a part of them. It should be borne in mind that the lesion noted was not necessarily the only one present, but was the most marked and presumably the one to which the pain was due. I say presumably because we find these same lesions in patients who have no dysmenorrhea, but to go into the relations of all these lesions to dysmenorrhea would lead us further than the limits of this paper would allow. Of the 112 patients examined the following were found: Endometritis, 23; retroversions, 14; pyosalpinx, 17; anteflexions, 14; laceration of cervix and endometritis, 10; cervical stenosis, 8; constipation, 7; retroflexions, 4; enlarged ovaries, 4; fibroids, 2; prolapsed ovaries, 2; prolapsed uterus, —; lacerated cervix, 1; membranous dysmenorrhea, 1; nothing found, 5. Total, 112.

Of the 23 in whom endometritis was apparently the most marked lesion, 9 had had their last pregnancies terminate in abortions, 5 are known to have had gonorrhea, and of the 8 in whom nothing further than a cervical endometritis was noted it is highly probable that a considerable number had had gonorrhea. Only one case that was probably a corporeal endometritis was noted.

Of the 18 retrodisplacements, 13 were retroversions in which no adhesions were detected; 3 retroflexions with no adhesions, and 1 retroflexion and 1 retroversion with adhesions. Two other retroversions with pus tubes are in the list of pyosalpinx cases.

Of the 17 cases of pyosalpinx, 9 were of gonorrheal origin, 2 probably puerperal and the remaining 6 were due to an infection which could not be traced directly either to gonorrhea or to a puerperal infection.

Ten of the 13 anteflexions had never been pregnant; the other 3 having been pregnant one or more times. At least 1 of the 10 is known to have become pregnant after dilatation, and gauze packing had been used. This patient had also had gonorrhea.

In 3 of the 8 cases of stenosis of the cervix the lesion was due either to a cicatrix forming after operation on the cervix or after laceration.

The patient suffering from membranous dysmenorrhea made but one visit. She brought with her a complete cast of the interior of the uterus, and said that she had passed such a cast at each period since her last confinement, which had been five years previous to the visit.

From these cases it is seen that 100 out of 112 patients suffering from painful menstruation, who were examined with a reasonable degree of care, were found to have some marked organic lesion of the internal generative organs.

The practical conclusion to be drawn is that, dysmenorrhea being

due in nearly all cases to some local trouble, the treatment for its relief must be directly toward relieving the local disease.

Dr. T. A. Ashby: I agree with Dr. Gardner that dysmenorrhea is a symptom, and is due to a local lesion, and I believe that stenosis and anteflexion are responsible for a majority of the cases. It is confined largely to the sterile woman or the ones who have been infected. I have seen a few cases of fever and simple ovarian dysmenorrhea where it was necessary to remove the ovaries to cure the pain, but these cases are very rare. In cases where the ovaries were removed the corpora lutea were found to be the same as those of pregnancy. Ovariotomy should be the last resort.

Dr. William E. Moseley: I believe that anteflexion is a much more common cause of painful menstruation than is commonly recognized. I agree with Dr. Ashby that it is the most common cause. The class of cases where you can make out the most direct cause is among the younger women. Dysmenorrhea associated with anteflexion is apt to be in women who are debilitated.

Dr. Gardner: These 120 cases of dysmenorrhea have been collected from about 1300 women with various complaints. In many cases this menstrual pain was secondary to some other more troublesome discomfort. My statistics certainly do not agree with Dr. Moseley and Dr. Ashby, when they state that the majority of patients with dysmenorrhea have anteflexion. Only a fraction over 13 per cent. of the cases which were examined had anteflexion. I think they have both been misled by depending upon their memories instead of upon their written statistics. Patients who suffer from dysmenorrhea due to anteflexion, as a rule, do not have pain at any other time, and this emphasizes that one symptom. While the larger number of patients suffering from dysmenorrhea due to other lesions have other pains and other complaints which mask the dysmenorrhea, I think this accounts for the patient's dysmenorrhea due to anteflexion being more distinctly remembered.

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PHILADELPHIA, NOVEMBER 30, 1895.

THE PROPHYLAXIS OF PROSTITUTION.

Dr. Denslow Lewis, of Chicago, in the New York Medical Record of November 9 gives an interesting article on how to deal with this subject.

He states very truly that civilization looks upon the subject with such horror that, instead of coping with the evil and minimizing the pernicious results, it throws the whole thing over.

"Venereal disease is recognized, by those who know about it, as wide-spreading in its effects. The position has been taken that any attempt at controlling the disease results in the extension of prostitution. It is said that if men knew they were safe they would gratify their sexual passion more freely than they do now. In other words, men are said to be restrained by the fear of disease more than anything else. And then some persons say it serves them right if they are wicked enough to consort with prostitutes. They get only what they deserve. The wages of sin is death. The absurdity of this statement, as White has pointed out, is seen if it is followed to its logical conclusion. If it is right for every man who has intercourse with a prostitute to become diseased as a divine retribution for his indiscretion, we must encourage disease in each prostitute to make sure that no transgressor fails to receive his just punishment for his sin. Moreover, the man is often not the only victim. His wife, his children, his neighbors, all persons he comes in contact with, may fall innocent victims to the disease that he disseminates.

"For this reason, if for no other, medical men must consider the prophylaxis of venereal disease in its relations to prostitution. All will agree, I am sure, that there is a possibility of improving the present conditions; all will acknowledge that something should be done rather than persist in the 'let-alone' policy now in existence.

"This thought leads to the consideration of the method called regulation, which means usually a systematic registration of all prostitutes and periodical inspection by deputized medical men. It means in some countries many things besides, dependent on local conditions. I will not detail the varied statistics that have been compiled in attempts at determining the value or worthlessness of regulation. It is easy to prove almost anything by statistics. I will simply say now that in every instance where regulation has been persisted in for any considerable length of time under proper supervision by qualified officials, the result has been in the main satisfactory. It has not always been as satisfactory as we would wish, but it has accomplished something. it has diminished venereal disease among soldiers and civilians and brought more cases to the proper hospitals where the disease could be most satisfactorily treated. It has decreased the number of public women and produced a marked disappearance of young prostitutes. It has lessened the number and improved the character of the public houses. It has made segregation a possibility, so that police surveillance and supervision have been more systematic. It has restricted debauchery and prevented the use of these houses as the harborers of thieves and other criminals. Can it truthfully be said that the 'let-alone' policy has accomplished even one of these results? The proper policy of the political body, be it State or municipality, that has jurisdiction over prostitution, should be not to close the eyes and say nothing exists because nothing is seen. Much less should the presence of prostitution be disregarded on account of its loathsomeness or its contaminating influence. By education, by religious instruction, by the judicious inculcation of adequate knowledge, by proper environment, and above all by a radical improvement in the economic conditions of our dependent young women, by teaching our young men principles of honor, of justice, of chivalry and of charity for those who in pity should be able to look to them for protection and support—by these means we shall tend to restrict prostitution by preventing its increase through the agency of rational measures consistently applied.

"As for the prostitute of to-day, let us grant her that liberty to which she is entitled; let us realize why she is what she is, and be just to her. At the same time, when we are permitted by the repeal of the State law to act in her case as we act toward every other source of infection, we will take all proper measures to diminish the extension of the disease

to which she is specially liable, and in our endeavor to act in this manner for the welfare of the public, history shows us we may count on her active co-operation.

"I have made my answer to the question of the subject. You will pardon me if I add a thought as to immediate action. There are matters of importance that can receive attention at once. They pertain not to prostitution as such, nor to its regulation nor restriction, except incidentally. They concern medical men especially, for they relate to a medical matter worthy of very serious consideration.

"Something can be done now to lessen the extent of venereal disease. In corporate institutions where large bodies of men are congregated, there can be proper inspection and suitable treatment which will diminish the spread of disease. In our houses of correction, our prisons, our asylums, our refuges, free treatment can be offered, and in most cases it will be gladly accepted. Our dispensary and hospital facilities are singularly inadequate for a metropolis like Chicago. Hospitals should be built and maintained exclusively for the treatment of this class of cases. The interests of the community demand that if we must have the prostitute, we shall do our best to have her free from disease. Our treatment may not be all we would desire. It is, however, better to have a certain amount of treatment than to have none at all. If we cannot take a woman with gonorrhea and cart her off to a hospital to be kept locked up there until she is well, as is done in Berlin and Paris, we can treat her as much as she will allow and instruct her in the use of antiseptic douches, for by that means some man may escape infection. If we cannot detain a woman with chancroid, we can destroy the virulence of the disease as far as possible, for it is better to do that than to do nothing. If we cannot keep a syphilitic woman under observation for two years, as I believe should invariably be done, we can treat her as long as she will permit, for incomplete treatment is better than none at all.

"In a word, let us do all we can to treat disease, for that is the main object of our existence. Let us do the best we can in these cases, for there is much left undone that, with proper facilities, might be done today.

"While awaiting the time when prophylactic measures shall diminish prostitution, let us for the present devote our energies toward the institution and perfection of such means as in our judgment will best tend to minimize its pernicious effects."

TRANSLATIONS FROM

Foreign Exchanges.

BY DRS. CHANDLER AND DAVIDOW.

RELATIONS BETWEEN EYE AND NOSE DISEASE.

Dr. Ernst Winckler, in No. 42 of the Wiener Therapeutische Wochenschrift, calls attention to the connection between diseases of the nose and those of the eyes, special reference being given to those eye troubles that are so often met with in the scrofulous children of the poorer classes. Dr. W. says: "The result of my investigations shows that in 164 children with bad eyes, 67, or about 40 per cent. of them, had affections of the upper air passages, and especially of the nose.

"Most of the children who were found to have their noses out of repair were bothered with stenosis of the nasal passages and its characteristic symptoms, bad sleep, oral breathing, crying out in the night-time, attacks of coughing on lying down, serous or purulent discharge from the nostrils, the openings of the nostrils glued together by the secretion, eszema narium, thickened upper lip, eczema of it and of the face."

After 16 pages of statistics, Dr. W. comes to the conclusion that most of these diseases of the eye can be permanently cured only when the nose is attended to, otherwise the eye troubles are bound to recur.

CREASOTE IN LUPUS.

Dr. W. P. Serenin, of Moscow (Vratsch No. 36), calls attention to the employment of creosote in the treatment of lupus and says that he was led to employ it locally after seeing the good results obtained from it in pulmonary tuberculosis. The results obtained were so astonishingly favorable that he felt called upon to publish his results, although incomplete.

He used creosote part of the time pure, but preferred a mixture of one part to from three to ten parts glycerine, or else one to ten parts olive oil. Occasionally Serenin painted the spots of lupus with the solution, but his general method of procedure was to cover the affected parts with antiseptic gauze, thickly folded and dipped into the solution. In hollow organs, as the nose, a tampon soaked in the creosote solution was introduced.

In the maculous and erythematous lupus, as well as in the stubborn tuberculous variety, Dr. S. often made slight incisions before applying the creosote. In the most stubborn cases a stronger solution (1:3) or even the pure drug was used. The bandages were changed daily, but no other medication than that of creosote was used.

The author describes at length one case where he had remarkable success with this treatment. The patient had been a sufferer from lupus for 15 years, and it had resisted all treatment until the whole forehead, lids and nearly the entire right cheek were attacked.

There was also a patch near the right elbow. After treatment for three weeks with creosote an improvement was seen, and in two and one-half months' time the skin was restored to nearly its normal condition and with very little disfiguration.

Besides its use in lupus, our author found it of great value in cases where there was suppuration dependent upon a tubercular condition. The action of the creosote was slow but sure and was used in combination with glycerine 1:10 parts.

HEART FAILURE IN PREGNANCY.

The critical moment in pregnancy with an affection of the heart is the interlocation of the placental course (Spiegelberg), and with it the dependent difficulty in circulation. After delivery the blood pressure in the aorta falls, and reaches the venous system. Other authors (Lohlein, etc.) attribute to the pressure on the lungs by the displacement of the diaphragm the increased blood flow in great variation in the blood pressure during a pain.

When there is no cardiac affection the increased area of heart dullness, frequently noticed, is to be attributed to the dilatation of the heart muscle. In addition may be ascribed the high position of the diaphragm and the hydremic nature of the blood.

A strong, healthy woman whose heart will compensate will withstand cardiac complications during pregnancy. but when the organism is feeble complication is easy and frequently dangerous to life. The interlocation of the placental course increases the function of the left ventricle; therefore, aortic insufficiency is fatal. Cessation of pregnancy in the sixth, seventh and eighth month is not infrequently due to the disturbed action of the heart.

The author observed 18 cases of pregnancy with heart disease. Mitral insufficiency 15 times, the remaining three with aortic insufficiency. Pregnancy of the first category was brought to terms in ten cases. In three cases spontaneous abortion, and in two cases artificial had to be performed. In failure of heart action in mitral disease the danger is greatest during the second period. —Dr. J. Lwow (Eschenedelnic, '95, Nos. 9 and 10).

ON THE CHANGES OF THE THYROID GLAND IN ACUTE DISEASES.

Dr. A. Sokolow, in Bolwitschnaia Yaseta Botkina, 1895, Nos. 19 and 20. —Author succeeded in examining at the laboratory of the Obuchow Hos-

pital the glands of mostly young subjects (7-53) who died of acute infectious diseases (cholera asiatica, septicemia, typhus abdominalis, influenza, croup, pneumonia), besides chronic nephritis, pernicious anemia, Addison's disease and acute yellow atrophy of the liver. In all the acute diseases was found more or less fatty degeneration of the follicular epithelium. It was especially marked in pneumonia crouposa; then follows septicemia, acute atrophy of the liver and cholera. At the same time the epithelia were separated most frequently parallel with the degree of the degeneration. Spongy parenchyma and albuminous degeneration could be detected in all acute cases. The chronic cases showed likewise changes. The author would not permit himself to judge as to the cause in the modification of the colloid follicle contents, which is to be expected in the activity of the gland.

The author frequently demonstrated the membrana propria.

K. GEORGIEWSKY: THE EFFECT OF THYROIDEA ON ANIMAL ORGANISMS (Ibid No. 21).

The experiments were made on 12 dogs, who received in part fresh thyroidea (50-100 grm. pro die) and partly the juice of the same injected subcutaneously.

In the first two weeks tachycardia developed (to 200 pulse beats per minute); the blood pressure increased. The dogs lost considerably in weight, notwithstanding the development of polyphagie and polydypsie. In the second or third week sugar is noticed in the urine (1.7 per cent.) and a strong secretion of nitrogen, especially in the form of urea. When this feeding was stopped the animal would gradually improve; on continuance they would die, either suddenly or from exhaustion. On section the medulla oblongata is found hyperemic. In one case capillary oozing was found in the different organs.

P. Loschtchilow gives the following in persistent malaria, where quinine alone refused to control:

R—

Inf. et cort chin. rubr.
Fol. eucalipt. glob.....ea. 30.0-45.0
Macera per hor. 24 ad colat.....200.0
Adde spiri. vini.....60.0

—Eschenedelnick, No. 11. A. D. D.

Gynecology and Obstetrics.

MENSTRUATION IN HOT COUNTRIES.

Joubert (Supposed Influence of Tropical Climate on Menstruation, Calcutta, 1895) agrees with Playfair in the opinion that the influence of climate on the catamenia has been unduly exaggerated. He has collected statistics of 3194 cases under observation at Calcutta during the last four years, including European and rich native women seen in private practice, and poorer natives under treatment for various diseases in the Eden Hospital, Calcutta. He found but very little difference in the percentages for various ages between the Europeans who had passed their youth in Europe and the women of pure European blood born in India; 23.4 per cent. of the former and 25.8 per cent. of the latter began to menstruate when 13 years old. Hence the climate seems to have no influence on the catamenia of women of our race. Indeed, the European-bred girls showed a larger percentage of menstruation, beginning at 12, than the native-born Europeans (13.4 per cent. against 10.8). Among the Eurasians a difference was at once noticeable, the type approaching that of natives between 12 and 14, but diverging again in the direction of the European type between 14 and 16. Such women are much influenced by native habits. In the class of pure natives, Hindus and Mohammedans, but chiefly the former, the greatest percentage of dates of first menstruation occurred at 12 (36 per cent.). Joubert shows that early menstruation is determined in

native women by precocious knowledge and too early sexual excitement.

ONE HUNDRED AND THIRTY-THREE CASES OF PLACENTA PREVIA.

Boss (Centralbl. f. Gynak, No. 35, 1895) collected these cases, which occurred between April, 1884, and April, 1894, in two institutions in Breslau. In one of the hospitales the proportion of placenta previa to normal labor was 1 in 216; in the other 1 in 42—a remarkable difference. In 27.9 per cent. the placenta was central, in 61.6 lateral, in 10.5 marginal. The percentages of presentations were as follows: Head, 66.2; breech, 1.8; footing, 8, and transverse, 24. Of the total 133 mothers 8 died—5 from direct effect of loss of blood, and 3 from fever or exhaustion after the first week. Twenty-seven per cent. of the children were born alive. As for management, the tampon, with expectant treatment, was applied in 7 cases, rupture of the membranes with forceps in 9, forced labor in 1 and combined version in 115; in this latter category all the maternal deaths occurred. The cases, however, in which combined version was employed were all severe. One patient died from air in the veins nine hours after labor.

VIBURNUM PRUNIFOLIUM IN ABORTION.

Mme. Michailowa (Meditzinskoje Obozrenije), after a trial in four cases, states that, contrary to the accepted opinion, this remedy not only does not always prevent abortion, but sometimes even occasions it, or, at least, accelerates a miscarriage already commenced. The hemostatic action of the drug (2 grains—0.12 gramme—in powders four times daily) was constantly observed, but in two cases, after the first day, contraction of the uterus followed, favoring the commenced abortion. In three cases, directly after the administration of a dose, contraction of the external os was observed. The author believes that, although viburnum may occupy a prominent place in the treatment of female diseases, it is not without danger in cases of threatened abortion.—Calcutta Med. Reporter.

MEMBRANOUS DYSMENORRHEA.

The os externum is scarified at intervals of three or four days between the periods; just before the flow is expected the cervix is dilated, the interior of the uterus is thoroughly curetted, and a spiral wire stem is introduced, which is worn continuously during at least three subsequent periods, the patient being directed to take hot vaginal douches even when menstruating. No harm has resulted from the use of the stem, and the patient is able to attend to her ordinary duties.—Duke.

THE RESUCITATION OF STILL-BORN INFANTS.

During the past three or four years, in several cases of this kind, apparently under the most hopeless circumstances, when all other standard methods had failed, Dr. Bedford Brown has resorted to hypodermic injections of brandy or whisky with the most satisfactory results. The amount used is five or six drops in first one arm and then in the other, 15 drops being the largest quantity used in a single case. If the mother has suffered alarming ante-partum hemorrhage, and the infant has been drained of blood before its birth, this method can avail nothing.—American Journal Medical Sciences.

TROUBLE AHEAD FOR THE BABY.

A Canadian newspaper calls attention to a nursing-bottle advertisement, which concludes with the words: "When the baby is done drinking it must be unscrewed and laid in a cool place under a tap. If the baby does not thrive on fresh milk it should be boiled."—Med. Record.

Medicine.

IN CHARGE OF
DR. E. W. BING, Chester, Pa.

TREATMENT OF ACUTE RHEUMATIC ENDOCARDITIS.

Dr. Richard Caton (Liverpool Medico-Chirurgical Journal, July, 1895) describes the results of his treatment of rheumatic endocarditis during the last 13 years. During that period rather more than 300 cases of acute rheumatism have passed under his care, 52 of whom developed endocarditis. In all the cases perfect rest, avoidance of exertion and a light milk diet were adopted. The heart was examined daily and care taken to exclude from the statistics any cases of cardiac murmur not due to genuine endocarditis. In 13 cases treatment was directed to the rheumatism only, no special remedies being employed for the cardiac complication; in one case the bruit disappeared spontaneously; in the others the lesion was permanent. These patients remained in hospitals for an average of 28 days. The remaining cases were treated on a definite plan. As soon as the first indications of a bruit made their appearance, sodium or potassium iodide in 10-grain doses was given thrice daily, in addition to the salicylates, and a blister the size of a florin was applied over the apex; as soon as the irritation of this blister began to subside, a second was applied close to it; then a third, and so on—the patient being kept meantime as quiet as possible, exertion, exposure and excess of nitrogenous food being strictly forbidden. A gradual subsidence of the bruit was frequently noticed in ten days. Of these 39 cases, 29 were discharged with normal heart-sounds, ten with a bruit. This exceptionally good result may be in part due to prolonged rest, the average duration of hospital residence being 41 days, and of confinement to bed 36 days.—Quarterly Med. Journal.

THE INCREASE OF GLYCOSURIA.

If we may believe Dr. Worms, of Paris (Bulletin de l'Academie de Medecine), one of the manifestations of advancing civilization is an increase in the production of sugar, not through the agency of the corn-stalk or sorghum plant, but through the activity of the human organism. M. Worms has come to the conclusion that in persons engaged in brain work and leading a sedentary life, the proportion of glycosurics is 7 per cent. This conclusion was reached from examining the urine of 100 such persons. Further investigations have raised the proportion of glycosurics to 10 per cent., and he considers this the rate in any series of 100 scientists, artists, business men, doctors and lawyers, etc., between the ages of 40 and 60. Dr. Worms quotes Bertilly's statistics, which show that diabetes is on the increase, the mortality in Paris having almost doubled in the last ten years. The author's own experience tends to show that glycosuria is increasing, but, happily, is not the severe type; in fact, he estimates that the proportion of true diabetes, of grave form, to glycosuria is only about 5 per cent.

It is interesting to learn that glycosuria is one of the innumerable attendants upon a progressive and "hustling" civilization, and also to know that it is not one of the painful and malignant manifestations of our evolution. Glycosuria, in its mild form, is quite compatible with long life, but it compels the sufferer to live a most hygienic existence, both as to diet and mental and physical activity. Glycosuria of this type especially is often associated with excessive nervous activity. The glycosurias that are bred in indolence and over-indulgence are much more severe and dangerous in form.—Med. Record.

A NEW CURE FOR HAY FEVER.

Fuber, of Hamburg, who suffered a great deal from hay fever during last summer, noticed that in winter a

coryza was accompanied with hot ears, which regained their normal temperature when the discharge from the nose was established. He tried a reverse order of things on the hay fever, and rubbed his ears until they became red and hot. It is now the third summer he has led an endurable existence. As soon as there is the least amount of fullness in the nose the ears are noticeably pale. A thorough rubbing of the ears has always succeeded in freeing the nasal mucous membrane from congestion. The rubbing must be thorough and repeated.—Calcutta Med. Reporter.

TREATMENT OF CARDIAC DISEASE.

In strychnine we have an ideal cardiac stimulant, which not only acts upon the circulation, but as well upon respiration, digestion and assimilation. It is especially indicated in the weak heart of pneumonia and febrile processes, given hypodermically in 1-30 to 1-10 grain doses, repeated until some sign of the drug is manifested. It is also useful to relieve the alarming symptoms which occur in surgical anesthesia, in the cardiac weakness often associated with neurasthenia, and in that due to depressed nerve-force. Strophanthus is of great value as a cardiac sedative in that form of tachycardia so common in exophthalmic goitre. These two drugs will retain their supremacy because of their influence over the vital centres in the medulla, to which the various systems of the body look for support and encouragement.—Krauss, Med. Times.

DYSPEPSIA.

In a lengthy article by Dr. Simon Baruch, of New York, published in a recent issue of the Medical Record, the author arrives at the following conclusion:

1. Dyspepsia, though not a disease per se, demands the utmost interest of the physician.

2. A clear diagnosis of the source of the various manifestations of difficult digestion offers the only guide to successful treatment.

3. Few cases of dyspepsia will be encountered which resist a judicious management based upon correct diagnosis and simple treatment of local and general conditions, especially the latter.—Med. Summary.

Miscellany.

FAKE MEDICAL COLLEGES.

The Cincinnati Tribune has done itself much credit in taking up the cause of higher medical education, and editorially and by cartoon declares aggressive war against those disreputable affairs whose chief occupation and specialty consists in selling diplomas at sight for a small money consideration. The business is one of obtaining money under false pretenses.—Cincinnati Lancet-Clinic.

HEREDITY IN LONGEVITY.

The Dublin Journal of Medical Science quotes an interesting statement by Sir Benjamin W. Richardson concerning his observations on the duration of life of the offspring as compared with that of the parents. He considers that if the ages of the two parents and of the four grandparents be added together and divided by six, the age of the case in point will be told with an average variation of not more than two. If the ages of the parents are high, the offspring tends to improve on them; if low (say an average of 40 or lower), the life of the offspring will probably be shorter.—Jour. of the Amer. Med. Ass'n.

KISSING THE BIBLE.

The dangerous custom of kissing the Bible in the police and other Courts of justice has often been protested against in scientific journals. The practice, however, still continues unchecked, except by a few persons who have the hardihood to affirm instead of taking the oath. From a scientific point of view it is hardly possitble to estimate correctly the danger arising from the transmission

of germs of all kinds from mouth to mouth upon the covers of filthy binding. The greatest risk, of course, is from syphilis, and there can be no doubt that it has often been communicated in this way. The public journals have of late years made the discoveries of bacteriologists a pet subject for startling paragraphs. They have found horrid germ dangers bristling in banknotes, pouring from penny trumpets, buried in bread, and lurking here, there and everywhere, greedy for human life. Yet they appear for the most part to have overlooked the terrible bacteria-laden Testament, that on every working day throughout the year is put into circulation in the Law Courts of this so-called scientific country. Yet if a witness have the courage to protest and refuse to take an oath administered under such conditions he is apt to incur the ill-will of the Court. At this period of the world's history it is needless to point out that the mere fact of having pressed a sacred volume to his lips never yet hindered a man, if he had previously made up his mind to give a false evidence.—Medical Press.

THE SERUM TREATMENT.

The treatment of diphtheria and other diseases by antitoxic serums has taken hold in France to such extent that it has been proposed to create an International Institute of Sero-therapeutics for the purpose of guaranteeing to the profession the purity and strength of the serums required. It is said that some of the serums sent out from certain laboratories are greatly wanting in these qualities. The proposal is to place the Institute in Switzerland, in order that international jealousy may be avoided.

The Japanese Army is accompanied by 1350 medical attendants, of whom 380 are surgeons. The largest of the military hospitals is at Hiroshima. The staff consists of 56 surgeons and 501 nurses, as well as 173 surgeons and nurses from the Red Cross Society, in which many of the Japanese nobility serve. The society has 138 practitioners and nurses in the field. Dr. Kitasato, who received his medical education in Germany, deserves much of the credit for the advanced condition of surgery, medicine and sanitary science in Japan.

According to the latest returns issued on the present state of cholera in Russia, there occurred during the fortnight in the province of Podolia fifty-one cases and nineteen deaths from that disease, and in the Province of Volhynia 7827 cases and 3085 deaths.

DEATH RATES AND RACE.

I will not weary you with further details of figures, which those of you who are specially interested in the subject will find in the reports of the vital statistics of the eleventh United States census, but will merely say that the corresponding data from Boston, Philadelphia, Baltimore, Washington, and from the New England States as a whole, taken with those from New York State and New York city, and with those derived from a special investigation of over 10,000 Jewish families, including over 50,000 persons, lead to the following conclusions as being probable for the United States:

1. The colored race is shorter lived than the white, and has a very high infantile death rate; it is specially liable to tuberculosis and pneumonia and less liable than the white race to malaria, yellow fever and cancer.

2. The Irish race has a rather low death rate among its young children, but a very high one among adults, due to a considerable extent to the effects of tuberculosis, pneumonia and alcoholism.

3. The Germans appear to be particularly liable to disorders of the digestive organs and to cancer.

4. The Jews have a low death rate and a more than average longevity; they are less affected than other races by consumption, pneumonia and alcoholism, but are specially liable to diabetes, locomotor ataxy and certain other diseases of the nervous system.—Dr. J. S. Billings in Med. Rec.

The Times and Register.

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ROYAL COLLEGE OF PHYSICIANS OF ENGLAND 30 DEC 95 LIBRARY

Original.

THE LOCAL APPLICATION OF COLD IN ACUTE PNEUMONIA.

(Abstract of Second Collective Report.)

BY THOMAS J. MAYS, A. M., M. D.

Read October 9, 1895, before the Philadelphia County Med. Society.

In the Medical News of June 24, 1894, I presented a collection of fifty cases of acute pneumonia which were treated with ice-cold applications to the chest. Since that time, and especially during the early part of the present year, when through the kindness of the medical press I was enabled to extend a general invitation to the profession for reports of pneumonia cases which were similarly treated, I have received 145 additional reports—making a total of 195 cases. To the medical journals which so kindly published my announcement, and to the medical gentlemen who so courteously and generously responded to my appeal, I take pleasure in tendering my warmest thanks, for it is not saying too much that they are rendering vital assistance in a work which will unquestionably serve to rivet the attention of the profession to a most valuable and indispensable measure in the treatment of pneumonia, of which those who have not seen its effects can form no adequate conception. Furthermore, there is no logic more powerful than that which comes from large numbers, and hence I sincerely trust that every medical man who, in addition to that which is recorded here, has had or will have experience with this mode of treatment will send details of same to me for future publication.*

Of the 145 cases which are comprised in the present collection only 93 are reported with sufficient detail to enable me to tabulate them; close notes of the remainder were either not taken, or were lost after they had been obtained by the observers.

Sex. Among the total number the sex is noted in 143 cases, of which 67 are male and 76 females.

Age. The age is given in 143 cases. The number of cases occurring in each decade is as follows: Below one year (three weeks, six and a half months, and eight months, respectively),3; between one and ten years, 27; ten and twenty, 34; twenty and thirty, 26; thirty and forty, 29; forty and fifty, 16; fifty and sixty, 2; sixty and seventy, 5; seventy and seventy-five, 1.

Highest range of temperature. This is recorded in 126 cases—48 males and 78 females. The highest temperatures attained in these cases were as follows: In two cases it was 100 degrees; in two, 101 degrees; in three, 102 degrees in five, 102 1-2 degrees; in nineteen, 103 degrees; in ten, 103 1-2 degrees; in thirty-seven, 104 degrees; in ten, 104 1-2 degrees; in twenty-one, 105 degrees; in six, 105 1-2 degrees; in six, 106 degrees; in one, 106 1-2 degrees; and in four, 107 degrees F.

*Blanks for the report of cases will be furnished by me on application.

The highest average temperature at different age-periods of 125 cases. Below the age of five years there were 14 cases with an average temperature of 104.68 degrees; between five and ten years, 13 cases with an average temperature of 103.84 degrees; between ten and fifteen, 11 cases with an average temperature of 104.95 degrees; between fifteen and twenty, 18 cases, and an average temperature of 104.36 degrees; between twenty and twenty-five, 8 cases, and an average temperature of 104.50 degrees; between twenty-five and thirty, 17 cases, and an average temperature of 103.55 degrees; between thirty and thirty-five, 8 cases, and an average temperature of 103.68 degrees; between thirty-five and forty, 17 cases, and an average temperature of 103.76 degrees; between forty and forty-five, 8 cases, and an average temperature of 104.12 degrees; between forty-five and fifty, 5 cases, and an average temperature of 104.20 degrees; between fifty-five and sixty, 1 case, and a temperature of 104.50 degrees; between sixty and sixty-five, 3 cases, with an average temperature of 104.16 degrees; 1 case between sixty and seventy, and 1 between seventy and seventy-five, with a temperature of 103 degrees and 102 degrees, respectively.

The highest respiratory frequency. This is noted in 55 cases, which may be grouped into the following age-periods: 6 below five years; 3 between five and ten; 6 between ten and fifteen; 10 between fifteen and twenty; 3 between twenty and twenty-five; 9 between twenty-five and thirty; 1 at forty; 8 between thirty-five and forty; 3 between forty and forty-five; 3 between forty-five and fifty; 1 each between fifty-five and sixty; sixty and sixty-five, and seventy and seventy-five.

Days of crisis or subsidence of fever. These are noted in 113 cases, and they occurred as follows: In 8 cases at the end of the first day; in 18 at the end of the second day; in 7 at the end of the third day; in 18 at the end of the fourth day; in 16 at the end of the fifth day; in 13 at the end of the sixth day; in 11 at the end of the seventh day; in 6 at the end of the eighth day; in 9 at the end of the ninth day; in 1 at the end of the tenth day; in 3 at the end of the eleventh day; and in three at the end of the twelfth day.

Number of cases of single and double pneumonia. There were 108 cases of single and 31 cases of double pneumonia, or nearly four times as many of the former as of the latter. The average highest temperature of the single pneumonia cases was 104.51 degrees, while that of the double cases was 104.62 degrees. The percentage of deaths among the former was 3.70 and among the latter 6.45.

The mortality. Among the 195 cases there were 7 deaths, 4 males and 3 females, or a mortality rate of 3.58 per cent. The oldest of these was seventy-four and the youngest was sixteen years. Three were double and four were single cases of pneumonia. The highest temperature attained among these cases was 104 degrees and the lowest 102 degrees, or an average of 103 2-3 degrees, there being only an average difference of 0.34 degrees between those who died and those who recovered. The personal history of those who died was as follows:

1. Adult, had a chill ten days before he was seen, and died three days after being admitted. When he came to the hospital he was cyanotic, delirious, and had excessive diarrhea. His pneumonia was double.

2. Aged 37 years, had diarrhea and delirium tremens, and his condition was complicated with chronic lead-poisoning. His highest temperature was 102 degrees.

3. Aged 28 years, an acute exacerbation of chronic pneumonia.

4. Aged 26 years, double pneumonia was admitted four days after the chill. His temperature was 103 degrees and respiration 45; breathing very labored and painful. Died sixteen hours after admission, of apnea. Post-mortem examination showed chronic phthisis in both apices, a cavity, with chronic consolidation around it, in left apex. The lower lobes of both lungs were hepatized, and the middle lobe of right side was in a state of congestion.

5. Sixteen years old, admitted four days after chill with double pneumonia, at which time she had an offensive diarrhea, bloody stools, and hemoptysis, and was cyanosed and in a stupor. Died on the evening of the second day after admission.

6. Aged 74 years, highest temperature 102 degrees. Died on the eighth day. Ice bags were applied from the first to the third day.

7. Aged 40 years, whole of right lung involved. Highest temperature 194 degrees. Ice applied on first and second days. Died on the eighth day.

Comparison of Results.—Whatever opinion we may hold in regard to the value of any treatment, it is quite obvious that in the long run the verdict will favor that one which shows the smallest mortality rate. I am well aware that statistics are often unreliable unless they roll up into large figures, yet I believe that the number of cases which I present for your consideration to-night will form a basis on which to rest an opinion of the treatment here advocated; but before drawing any positive conclusions I will briefly inquire into the results which have been obtained by various other forms of treatment of pneumonia. Dr. Olser reports that out of 1012 cases treated in the Montreal General Hospital 20 per cent. died, and that in the Charity Hospital, of New Orleans, the mortality rate was 20.01 per cent.; of 1000 cases of pneumonia treated in the Massachusetts General Hospital from 1822 to 1889, the death rate was 25 per cent. Dr. Hartshorne states that the mortality rate from this disease in the Pennsylvania Hospital during the years 1884, 1885 and 1886 was a little more than 31 per cent. Louis treated 107 cases, of which 32, or about 30 per cent., died. Grisolle had a mortality of 16 per cent. in 232 uncomplicated cases. Rasori treated 648 cases of pneumonia with large doses of tartrate of antimony, of which about 22 per cent. died. With the same medicine Grisolle lost 18.8 per cent. of 154 cases, and Dietl 20.7 per cent. of 106 cases. During a period of sixteen years previous to 1861 Dr. Huss, of Stockholm, treated 2616 cases, with a death rate of 10.74 per cent. Of 129 cases treated on the restorative plan by Dr. Bennett, of Elinburgh, only four died, giving a mortality of 3.1 per cent. Dr. Hegele, head physician of the Wurzburg Hospital, during 1848 and 1849 treated 40 cases with cold water, without a single death.

Now what conclusions are we to draw from a death rate which varies all the way from 30 per cent. to nothing? Are we to believe that all pneumonics recover under certain methods of treatment, and that a large proportion of them will necessarily die under others? No one would be justified in making quite such a reckless assertion, yet it must be admitted that the truth lies somewhere between these two extremes. But in order to get at something more tangible, let us first find the rate of natural recovery from this disease. What proportion get well under no treatment whatever, and what proportion die under such circumstances? After having ascertained this we will be in a better position to estimate the worth or worthlessness of any treatment. It is very fortunate that this important link has been furnished. In 1844, '45 and '46 Dr. Dietl, a Viennese physician, treated 189 cases of pneumonia practically without medicine, and with a death rate of 7.4 per cent. From 1847 to 1850 he treated a second series of 750 cases, with a death rate of 9.2 per cent. That this represents, at least approximately, the rate of natural recovery from pneumonia is also confirmed by the results of pure homeopathic practice, which may be regarded as equivalent to the let-alone or do-nothing treatment. Thus, out of 94 cases of pneumonia treated in the homeopathic section of Leopoldstadt Hospital in Vienna, 9.57 per cent. died; out of 24 cases of pneumonia treated in the same institution by Drs. Wurmb and Caspar, 12.55 per cent. died; and Dr. Tessier, of Paris, treated 41 cases of pneumonia, homeopathically, with a mortality of 7.3 per cent.

If these figures are reliable, and there is no evidence that they are not, they show that, as a rule, the

natural tendency to recovery in pneumonia is about 90 per cent., and that, therefore, any treatment which is not capable of holding the death rate down to or below 10 per cent. is not only worthless, but actually mischievous. So far as I apprehend this, however, it only applies to an ordinary aggregate of favorable and unfavorable cases of pneumonia, and not to exceptional instances like those which are met in fatal epidemics of pneumonia, or in a large number of successive cases of alcoholic, senile, or latent pneumonia, as may happen in the experience of any medical man with a large public or private practice.

When we come to compare the results of the ice-cold treatment of pneumonia with those which have been obtained from other forms of treatment, it is safe to say that the former are infinitely more satisfactory than the latter. Although Dr. Bennett's figures excel those which are presented in my collection by about one-half of one per cent. it must not be forgotten that his results are entirely over-shadowed by Dr. Hegele's 40 cases, which were treated hydropathically without a single death. Moreover, it must not be overlooked that, so far as my knowledge extends, Dr. Bennett's observations have not been duplicated by anyone on the lines laid down by him; while, on the other hand, this is not the case with the cold treatment; its results in my collection have not been secured by a single individual only, but by as many as thirty-four different observers, among whom are a number who have seen a score of cases, and many more a lesser number in succession, without a single death. This of itself speaks volumes in favor of the method here advocated, for it shows that the personal equation of the practitioner cannot enter very largely into the success of the treatment.

Then again, I express the hope that these statistics will tend to put to rest the mischievous and irrational dogmatism which regards pneumonia as a self-limited disease, like smallpox and scarlatina, and consequently wholly beyond the control and influence of medicine. Not only is this position refuted by the fact that the death rate in pneumonia when treated by local cold applications is lower than if the disease is allowed to go untreated, but its unsoundness becomes still more apparent when we learn that the cold treatment hastens the appearance of the day of crisis.

Now cold has a marked and decided influence on the pneumonic process, not only in bringing it to a favorable termination, but to materially shorten its course. This abortive power of the ice has been noticed and spoken of by many of the observers in my collection, and I believe that it demonstrates the great value of the remedy more than anything else.

Mode of death in pneumonia, and its therapeutic indications. Now a few words in regard to the tendency toward death in pneumonia. A high fever, high pulse rate, frequent and difficult respiration, extensive exudation, etc., are universally regarded as critical and serious symptoms and conditions of this disease. On deeper examination I believe, however, that these are mere superficial manifestations of grave disorder of the nervous system below, and that the gravity and intensity of each attack are universally related to the degree of resistance which is offered by the nervous system against the ingress of the disease. This is corroborated by the common observation that pneumonia is ushered in by intense nervousness, violent headache, active delirium, local muscular spasm, and general convulsions. Lemaire reports a case (Centralbl f. Nervenheilkunde, 1888, vol. ii. p. 680) in which two attacks of pneumonia were preceded each time in the same individual, the first at the age of 32 and the second at 40, by genuine epileptic seizures, and this in a person who had not been subject before or afterward to the latter disease. The close affinity between pneumonia and diseases of the nervous system is also shown in the almost constant association of the former affection with cerebrospinal meningitis, and with other acute diseases of the brain and the

upper portion of the spinal cord. That disorder of the nervous system is capable of originating pneumonia is by no means a new doctrine. A few years ago Dr. Hughlings Jackson, in discussing a paper on "Pulmonary Paresis," read by Dr. B. W. Richardson, before the London Medical Society, said that he regarded acute pneumonia as a form of herpes zoster of the pneumogastric nerves (Proceedings London Medical Society, vol. xi. p. 95). Dr. Fernet, in a tric Nerves as a Cause of Acute Pneumonia" (Praktische Heilkunde, 1879, i, p. 18), expresses the conviction that the so-called fibrinous pneumonia is a herpes of the lungs brought about by disease of the pneumogastric nerves. Professor Baelz, in the course of his lectures in the Tokio University of Japan, teaches that pneumonia is a reflex vasomotor exudation neurosis (Centralbl f. klin. Med., 1888, p. 883). It is thus seen that this line of thought has occupied some of the foremost men in the medical profession.

From this we learn that one of the most threatening dangers in pneumonia comes from a defective supply of nerve force to the lungs. This is indicated not so much by a great frequency of breathing as it is by a frequent and laborious respiration. The patient who lies there moaning with and struggling for each breath, and who complains of pain and distress in the gastric region—the evidence of an over-worked diaphragm —must always be regarded with the gravest concern. Here the tendency toward death is pulmonary exhaustion—a condition sometimes found without very marked extension of the exudation process or much fever, and most frequently in the aged or in those whose nervous systems are overworked or exhausted by alcoholic excess, etc. Equal to the danger of the above condition is the extension of the disease in the lungs. When this covers a large area, as in double pneumonia, there is marked interference with the function of breathing, and the patient tends to die for the want of sufficient aerating surface.

The next in importance are hyperpyrexia and a weak heart. It is not necessary to say anything about the detrimental effects of high fever in pneumonia. It is also well recognized that, in virtue of its close affiliation with the lungs, a weak and disordered heart is a constant accompaniment of pneumonia.

The therapeutic indications in the management of pneumonia are, therefore, as follows: (1) Suppression and limitation of the process of exudation; (2) Support of the nervous system and particularly of the pulmonary nerve supply; (3) Reduction of fever; and (4) Maintenance of the function of the heart.

Now what part does cold play in filling these indications? It cannot fill them all, but it covers those of greatest importance. First of all it reduces the pyrexia, strengthens the pulse, tones up the heart, diminishes the pain in the chest, alleviates difficulty of breathing, and gives greater general comfort to the patient. It is capable, however, of doing a great deal more. In virtue of its power to stimulate nerve functions and to contract small blood vessels it promotes the pulmonary circulation, relieves stasis, hastens resolution, and disperses the products of exudation. Strychnine in large doses to sustain respiratory and cardiac innervation; concentrated food of the most nourishing character, like fresh beef juice, milk, brandy, etc., to support the constitution; digitalis to maintain the heart; oxygen by inhalation to relieve the breathing; morphine to produce sleep; ice-cap to the head to diminish restlessness; and strapping of the chest in case of great pleuritic pain, are some of the agents which will fill most of the remaining indications.

PART II.—DR. DANOIS' ARTICLE.

(Continued from last number.)

EXTERNAL ANTISEPTIC MEDICATION IN GONORRHEAL OR OTHER INFLAMMATIONS ALONG THE URINARY TRACTS.

The superiority of this over internal medication is self-evident to any one who has investigated the subject.

Lavage is definite and exact, treatment direct and energetic, without implication of the digestive system or other internal organs. Internal treatment is indefinite in results and may lead to trouble from irritation or severe inflammation succeeding over-dosage by over-action.

Unhappily, however, this line of treatment necessitates the employment of instruments, something always repugnant to the afflicted. It is sometimes painful and not always free from danger. External antisepsis here embraces lavage and instillations. Lavage has been employed in vesical troubles for a long time. It is used for two purposes; one, the least important, is to secure the evacuation of septic products retained at the fundus of the bladder. This is an action purely mechanical. The other consists in injecting materials which destroy those germs that vegetate in the interstices of the bladder. Both together are generally necessary, but we must not lose sight of the fact that simple lavage of warm, sterilized water is often highly useful.

Vesical lavage must be always made with a syringe, and not by an irrigator or syphon, because with this instrument we may gauge with precision the volume of force applied, and not produce such violent agitation or currents within the bladder as will lead to the detachment of the mucous membrane, or even, possibly, rupture.

The quantity of fluid injected each time must be proportioned to the sensibility of the bladder. It is important that the entire walls of the bladder are flushed, but when the vesical muscle is tense from inflammation we must be cautious not to overstrain it and discontinue as soon as pain is felt. A disregard of this precaution may lead to serious consequences. From 100 to 150 grammes may be usually injected with comfort and tolerance. Boracic acid solutions serve an admirable purpose in relieving pain, and slowly but surely destroying many of the pathogenic microbes. Guyon employs a 4 per cent. solution, and believes that this medicament acts by rather preventing suppuration than as an antiseptic; "is rather a preventive than curative." Mercier first introduced nitrate of silver as a remedy in cystitis many years ago. Its action is remarkable here, particularly in acute cases, when used with care and discrimination. Guyon writes "that of all remedies in suppurative cystitis, this takes the first place."

In order to facilitate the action of the drug it is always well to commence by washing out the bladder with warm water and boracic acid. The American formula is one part of nitrate of silver to 500 of distilled water, though it may be used as strong as 1 per cent. It will be always well to be cautious with this powerful agent, else hematuria strangury or recrudescence may follow its employment.

The injections may be made every other day until suppuration has ceased.

Instillation of stronger solutions of nitrate of silver may be advantageously employed in urethritis and cystitis; but they should always be preceded by free lavage, injected slowly and in minute doses until tolerance is acquired.

This agent is a most precious resource in this class of cases in producing an antiphlogistic action and relieving pain. Its analgesic action seems positively paradoxical, for though an irritant of great power itself, in the agonizing tenesmus of painful cystitis and in acute gonorrhea its effect is like magic. But like all valuable remedies it has its disadvantages if not used with discretion and in skillful hands. In tuberculosis or neoplastic disease it provokes free hemorrhage and great pain, while, on the contrary, under other circumstances it is a prompt hemostatic. Iodoform, bichloride of mercury and other medicaments have been employed here, but seldom with satisfaction or freedom from danger

A PRACTICAL STUDY OF THE BLOOD AND THE CIRCULATION, WITH A HISTORICAL REVIEW OF THE SUBJECT AND ITS BRIEF CONSIDERATION FROM THE STANDPOINT OF ITS CHEMICAL COMPOSITION, ANATOMICAL STRUCTURE, AND PHYSIOLOGY; INCLUDING CLINICAL STUDIES, AND EXPERIMENTAL RESEARCH ON THE LOWER ANIMAL.

BY THOMAS H. MANLEY, M. D.,
NEW YORK.

Continued from last number.

PART XII.

VENOUS ROOTLETS OR VENULAE: THE END OF THE ARTERIAL CIRCULATION AND BEGINNING OF THE VENOUS.—SUPPLEMENTARY ARTERIO-VENOUS ANASTOMOSIS.

The venous system is, physiologically, that part of the circulatory apparatus which drains off the residuary blood after it has irritated the tissues. It then moves it onward to be once more clarified by the lungs, and be sent by the heart on its course through the arteries. Claude Bernard described the blood as "the internal medium, or go-between of elements of the outer world and the tissues." Now the blood has discharged its functions, and enters the afferent vessels, having carried and distributed to the various organs and structures those elements so indispensable for their integrity and vitality. It has been noted that besides the tendinous, ligamentous, cartilaginous and corneal tissues, all purely epithelial structures are avascular. This may be demonstrated in the living current and post-mortem, in those vascular parts, as the papillary layer of the derma, the root sheaths of the hair, and in the cuboidal and columnar epithelia of the sebaceous and sudoriferous glands of the integument, which have been well injected with glue and Prussian-blue.

In no injected specimen, however, can we differentiate the various vascular structures. All are equally stained, so that we can only attempt to distinguish one set of vessels from the other, by their relative size and the direction which they take; besides it is highly probable that many of the more minute capillaries, which will only admit a mobile, living corpuscle, and are only a 3000th of an inch in diameter, will not permit to pass them a gelatinous mixture of a sesquicyanuret of iron and glue; the former being an active astringent tending to actively coagulate dead, albuminous structures. It is therefore probable that in most, if not all artificially injected and strained specimens, only the large arterioles are opened, and that the arborescent arrangement so beautifully clear in certain preparations for the microscope the territories of vessels, deeply stained, are chiefly arterial, with some of the larger capillaries only.

It has been pointed out that there are many direct connections between the microscopical arteries and veins, so that it can be demonstrated that there is a considerable quantity of the arterial blood, sent directly into the veins without entering the finer capillaries at all. What the exact proportion is has not been estimated, though it no doubt is considerable. And we find that according to the late researches of M. G. Gerard, of Lille, there are numerous inter-connecting canals between the larger arterial trunks and veins. (Sur. L' Existance des Canaux-Anastomotiques Arterio-Veineux, Archives de Physiologie, Normal et Pathologique, November, '95.)

This author's observations do not fully conform to those of Bernard, Muller, Sucquet, Hoyer and Bourceret, who claimed that there existed a supplementary circulation or connection. (Sucquet Circulation Derivative dans la tete et dans les membres chez l'homme, Paris, 1812.)

Arterio-venous anastomosis, Gerard alleges, is comparatively common in the groin, between the femoral-vein and the artery, between the axillary-

artery and the vein in the vessels of the head and the thorax, and even between the cava and aorta. They are not so commonly seen in the adult, though he has discovered them sufficiently often between the large trunks to warrant the belief that their presence in various situations is quite general in all, except those in very advanced years. He has found these connecting channels of communication in the most divers situations and particularly frequent at the flexures of the limbs, and in one instance found a short trunk of large calibre directly connecting the popliteal-artery with the vein. In fourteen subjects, infants who died before the fifth day after birth, Gerard discovered the following veno-arterial communications direct:

In the groin.....	5 times
In the axilla.....	3 times
In the popliteal space...	4 times
At the elbow 3	times
Between the aorta and vena-cava	1 time
	16 Anastomoses

These vascular communications in the adult, though frequently demonstrable, are indefinite and variable.

Morphologically, this complimentary vascularigation is interesting to note, particularly as we witness it in the larger trunks; inasmuch as it is a derivation very generally present in some of the lower order of the vertebrates and amphibia.

The precise role, innutritive processes, which it plays is yet rather a desideratum. Being most commonly witnessed over the articular areas, structures greatly exposed and the centres of active function, it may be that the accessory vessels, in some unknown manner, provide the increased pabulum so often required when the joints are actively exercised.

It may be, too, that as the vessels at the flexures of joints are exposed to great strain and injury in various movements of the limbs, those connecting vascular links permit of an escape-current from one set of vessels to the other, and in this manner save the bore of the vessels from an overstrain.

Relating to the capillary current, we once more turn to that division of the circulation wherein hypothesis must make way for ocular demonstration, at least as far as the corpuscular circulation is concerned, for we have good and sufficient reasons for believing that the plasma and colorless lymph freely circulate through tufts and planes of epithelial and other histological elements, in some sort of an orderly arrangement quite impossible to conceive of, independent of a tunneling of the route which those fluids follow. Indeed, Bernard and other physiologists contemporary with him believed that there was a circulation independent of the sanguiniferous or lymph, which they designated the "nutritive." Probably further researches will disclose more facts in connection with this important topic, for in no branch of medical science is more rapid progress being made in our time than in physiology. Its advances during the past twenty-five years have been phenomenal, and from every part of the world later revelations are coming forth.

We now have traced the blood-corpuscles as they were sent with a rush into the arterioles, in intermittent jets, to be then sent on, through vast ramifications of the capillaries, where they maintain an active but rather regular motion, until they approach the venulae, when their color deepens and their movement slackens, and, as we trace them further, their outline is lost, when, like clouds of smoke surcharged with carbon, they enter the thick-walled vein and are lost to view.

(To Be Continued.)

GONORRHEA IN WOMEN.

In gonorrhea urethral and vesical irrigation should be made with a solution of potassium permanganate, 1 per 1000 to 1 per 2000, according to the case. The quantity at each irrigation should be at least one litre. The irrigation should be practiced every day, the usual duration of treatment being from ten days to two weeks, or thereabouts.—Cumston, N. Y. Med. Record.

The Times and Register.

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HAS GONORRHEA A SPECIFIC MICROBE?

To the practitioner who is rather concerned with effects than causes of diseases, rather what will speedily cure his patient than an obstruse or merely physical speculation, this may seem an unimportant question. However, we can all understand that in our time of precision in diagnosis, and from a forensic standpoint, it is of the greatest importance that this should be definitely settled.

If it be said that a red-hot clap, the chaude de pisse of the French, can only succeed after an infection by a specific germ, or if it be maintained that a suppurative urethritis in an otherwise healthy individual is not infective, contagious nor venereal, then we must most certainly take issue with those who promulgate this view.

It is a well-known fact that, although a specific bacillus commonly is found in certain varieties of pharyngitis in diphtheria, as described by Brettoneau, who first gave putrid sore throat this designation, it may not be present at all. Then we are told a "mixed infection" is present. Diphtheria has become an exceeding ly common disease, since every type of sore throat with a Loefflus germ present is so labeled by the bacteriologist. On the contrary, with gonorrhea, though the infection never was more general, no case is now so branded unless bacteria are forthcoming in a case possessing certain definite morphological characters; therefore, the preposterous assumption is made that no matter how violent may be a patient's chordee, his vesical tenesmus or strangury, how abundant the discharge of greenish-yellow matter, he has no clap, unless we find the diplococcus of Neisser, arranged in a certain manner within the pus corpuscles. He has only "non-specific urethritis."

The late Professor Charles A. Budd used to relate to his class, as an illustration of the impossibility of gonorrhea without direct impure contagion, how a clergyman once came to him in great distress over an accidental (?) attack of clap, and, anxiously inquired if it were not possible for him to have become so infected in a water closet. To which Budd, in his usual brusque manner, replied: "Most certainly if you had a woman in there with you."

Vierodt and others, who have made this subject a special study, say that a diplococcus quite identical with the gonococcus may be found in the healthy urethra. Probably the truth is that the so-called specific microbe of gonorrhea is a cause, or an incident only, in certain types of the dis-

ease. At all events, it is of no consequence in the treatment, though some modern writers would have us believe that the infection of gonorrhea works widespread destruction in the neighboring parts, if not early and radically treated.

From a medico-legal standpoint we must be cautious not to attach too much importance to the presence or absence of Neisser's microbe. The latest observations on this phase of the question are inconclusive and discordant, and fail to provide us with such definite data as must be forthcoming to establish the innocence or guilt of a suspected party.

RHEUMATISM.

At this time of the year, with its variable atmospheric conditions, people of rheumatic tendency are especially apt to be tormented with pains and aches in the joints and muscles. The discomfort thus experienced is often out of all proportion to the severity of the trouble, and the sufferer may be prevented from attending to his usual avocation, or even from dressing himself. He finds himself practically helpless in many instances, and experiences more actual distress than a person suffering from far more serious disorders. The affections known as lumbago and muscular rheumatism are essentially of rheumatic origin, and, in order to successfully relieve them, it is not sufficient to rub the affected parts with liniments, but it is far more important to administer a drug which will attack the root of the trouble. For many years physicians relied upon salicylic acid for this purpose, but, while this remedy proved effective, it was not free from serious effects upon the heart and nervous system. A new substance, known as Salophen, has been recently introduced in Germany, which possesses all the good qualities of salicylic acid and has the great advantage of being absolutely free from risk. It is pleasant to take, does not upset the stomach, and relieves the feverishness, pains and stiffness in the joints and muscles with remarkable promptness, sometimes even in a few hours. Salophen should be given to adults in 5-10 grain doses, every two or three hours, according to the severity of the symptoms, and should be continued at longer intervals three or four times daily, for a day or two after relief has been experienced, to prevent the return of the disease.

APOLYSIN: A NEW ANTIPYRETIC AND ANALGESIC.

Drs. M. von Necki and J. von Jaworski, in the London Therapist of October 15, give an interesting account of this new preparation: Apolysin is nearly related to phenacetin, with this difference, that instead of being an acetic acid derivative of paraphenetidin, citric acid takes the place of acetic acid. Apolysin is a yellowish taste, though not so distinctly acid taste, though not so distinctively acid as citric acid itself, which dissolves in cold water in the proportion of 1 to 55, and in hot in any proportion. It melts at 72 degrees centigrade. In other respects apolysin closely corresponds in chemical behavior to phenacetin.

Present knowledge of pharmacodynamic relations indicated that apolysin from its constitution would be non-poisonous, split up into paraphenetidin, ethyl and citric acid in the organism, producing a reduction of temperature and analgesia, and the phenetidin eliminated in the urine in the form of a glycuronic or sulpho compound.

The absence of toxic properties in apolysin was proved by experiment on frogs and rabbits, 1, 4 and 8 per cent. aqueous solutions being gradually injected in the proportions of one-half to 4 parts apolysin to 1000 parts animal body-weight. The frogs as well as the rabbits bore the injections well and without any disturbance to the health or general condition. The products of the decomposition of apolysin were found in the urine of the rabbits combined with sulphuric acid. The urine possessed the same behavior towards reagents as after the administration of phenacetin. Compounds of glycuronic acid could not be discovered.

Before administration of apolysin to fever patients its antiseptic action was first tried on animals. For this

purpose two rabbits were taken, in one of which diphtheritic toxine, in the other a pure cultivation of pyogenous streptococci was injected. The temperature of the animal inoculated with toxine rose after three hours to 39.6 degrees C., and on the afternoon of the second day to 39.9 degrees C., 1 c.c. of a 10 per cent. aqueous apolysin solution was injected. The temperature rose in the evening to 40.5 degrees C., but on the next day the morning, afternoon and evening temperatures were 40.1, 39.5, and 39.2 degrees C. respectively, and on the fourth day at the same hours, 39.5, 39.1 and 39.0 degrees C. The second animal inoculated with pyrogenous culture exhibited a temperature of 40.3 degrees C. in the evening, and the next morning at 40.1 degrees C., 1 c.c. of a 10 per cent. aqueous apolysin solution was injected at 11; at 12 o'clock the temperature fell to 39.4 degrees C.; at 3 o'clock, 39.3 degrees C.; at 7 o'clock, 40.2 degrees C., and 9 o'clock, 40.1 degrees C.

Progressing to clinical observations, apolysin has been employed for the purpose of testing its antipyretic and analgesic properties in the following cases: Four cases of croupous pneumonia, 1 case of scarlatina, 1 case of abdominal typhus, 13 cases of influenza, 2 cases of puerperal fever, 1 case of pyemia, 5 cases of angina follicularis, 1 case of facial erysipelas, 3 cases of hemicrania, 2 cases of sciatica, 7 cases diagnosed generally as cephalagia, 3 cases of neuralgia nervi trigemini, 1 case of neuralgia cervico-occipitalis, and 2 cases of neuralgia plexus lumbalio. The apolysin was generally administered alone in powder form, in doses of 15 grains three times daily at intervals of an hour, and only in a few cases was it combined with bromides, and twice with caffiene salts.

From these investigations and clinical observations the following conclusions have been determined: Administered internally, apolysin has an antithermic action on fever patients, and, simultaneously with the fall of temperature, brings about the disappearance or abatement of quite a series of symptoms, especially painful symptoms.

In neuralgias, apolysin has an analgesic action, diminishes hyperesthesia, shortens the duration of single attacks and often causes the symptoms to disappear entirely.

Thanks to its chemical constitution, apolysin acts quickly and safely, and, as far as the observations have been conducted, does not cause any unpleasant symptoms.

The administration of apolysin is contraindicated on empty or fasting stomachs, or where there is an excess of acid secreted.

Apolysin is easily soluble, and is therefore more quickly absorbed, and more reliable in its action, than phenacetin, and similar remedies.

Apolysin is practically non-toxic, and, consequently, can be given in large doses in order to produce analgesic and antipyretic effects rapidly, without danger of bye-effects. Herein lies the principal advantages of apolysin.

Electro-Therapeutics.

IN CHARGE OF

DR. S. H. MONELL, Brooklyn, N. Y.

FARADIC ELECTRICITY IN APPENDICITIS.

Miss F. T., age 20; highly cultured and accomplished; delicate organization and nervous temperament; suffered from habitual constipation.

On the 14th of last March this young lady began suffering from severe pain in the abdomen, elevated temperature and occasional vomiting; bowels costive. She continued to grow worse under the domestic remedies used by the family, until the morning of the 17th, when I was requested to see her. The features were pinched, there was decided tumefaction, swelling and tenderness in the region of McBurney point; there was irritability of the stomach and complete anorexia, with dry surface and a temperature of 102. On a direct line from the superior crest of the ilium to the umbilicus about midway was a well defined tumor easily outlined with the finger tips and as large as a small orange; moderate pressure gave much pain; the

area of tenderness extendng some inches beyond and around the tumor. To unload the portal circulation and secure a thorough evacuation of the bowels I gave small doses of the mild chloride of mercury, and ordered a saturated solution of salts and glycerine enemata, to be given in 12 hours. Hot stupes were to be constantly applied day and night. To relieve nausea and quiet pain, ordered creosote, salicylate-Bismuth, chloroform water and codeine. The pain being constant this was continued for several days. All food was proscribed except iced buttermilk. To induce sleep trional in fifteen, thirty and finally sixty-grain doses, by enema, at night was given with very satisfactory results. The bowels responded well to the calomel and enema, with copious actions, but no improvement followed. The peritoneal tenderness continued to extend in a downward direction, until it reached Pouparts ligament on the affected side, involving the uterine adnexa, bringing on a premature menstrual flow. The hot stupes and other treatment, omiting the mercury, was continued until the 20th, without any improvement. Notwithstand daily movements from the bowels, there was no reduction in the size of the tumor, showing it was not of a stercoraceous nature. The stomach now began to rebel against all medication, and I realized, much to my chagrin, that I was soon to loose it as a medium for any further medication, and would be driven to the hyperdermic method as a dernier resort. Encouraged by my experience with faradic electricity in a former case of appendicitis I determined to at once avail myself of whatever good I could secure from it. Having one of the most improved high tension machines in the office, I ordered it sent over, and placing a large wire gauze electrode, well padded with flannels and wet with warm water over the entire area of abdominal tenderness, I connected it with the positive pole; a negative electrode, ten by twelve inches, was placed under the buttocks and a current from the 36 wire, 4500 feet in length, was turned on. The interruptions were the most rapid that could be had from the machine, and the current made barely perceptible to the patient. I personally supervised the first application, which lasted one hour, and ordered it used one hour in every four. Some degree of comfort was experienced from the first application and no persuasion was necessary to induce her to continue the applications. The hot stupes were ordered continued in the interval between applications, but as they had all along been attended with some discomfort, the patient declaring the nausea was aggravated by their use, I gave my permission to withdraw them. Within twelve hours the anodyne effects of the current became so manifest the young lady begged me to stop all treatment but the battery, and insisted that her stomach would not tolerate any more medicine. Having great confidence in the faradic electricity, I granted her request, and no medicines were given, nor local applications made other than the battery until convalescence was established. The seances were continued one hour in every four, from early morning until 10 P. M., and a few nights between 10 P. M. and 6 A. M. The applications were continued uninterruptedly until April 4, with slow but gradual improvement, when I pronounced her convalescent. The temperature remained elevated one or two degrees during the entire time, and the outlines of the tumor could be clearly made out with the eye alone. The temperature was now normal, the nausea gone; the tongue moist; the tenderness had disappeared, and the cold feet, from which she had suffered all along, requiring hot dry applications grew warm, and the bowels, heretofore requiring an enemata of salts and glycerine every other day, responded naturally.

A very material point in this case was the happy response of the bowels to the enemata, given every other day, for the relief of tympanitis; following each enemata, was a copious bilious discharge, showing I was not dealing with a stercoraceous form of appendicitis. It now occurred to me that if I would continue my applications, using a more stimulating cur-

rent, I might by subduing the subacute condition left by the acute attack and which, in my opinion, may explain their liability to recurrence, protect my patient against a recurrence, so the applications were continued, using the 32 wire, 2400 feet, for thirty minutes—at first three times, then twice daily, with slower interruptions, reducing the size of the electrodes and gradually increasing the strength of the current with each day's applications. Great caution is necessary in treatment during convalescence from acute inflammation, with this current, or you will over-stimulate, just as you can do with alcoholic stimulants in typhoid fever. Once or twice during the convalescent treatment of this case I had ample warning to reduce the strength of my current, and on two occasions deemed it best to return to the fine wire with rapid interruptions —hence the necessity of having an instrument with coils of different size and length, and with rapid and slow interruptions. One fact is worth a dozen theories, and that there is a material difference in the effect of coils of different size and length, and with rapid and slow interruptions, no one with a practical knowledge of faradic electricity will deny. The applications were continued in this case until the 13th, when all treatment was suspended. The young lady at this writing is in the enjoyment of her usual health, and was able in July and August to spend her vacation in the mountains of Tennessee. I shall continue to watch this case and note her susceptibility to a recurrence. Two years ago I was called in consultation to see a similar case, not however, as typical, yet well marked, that had been under the attending physician for five days, and continued to grow steadily worse under the ordinary treatment. The pain in this case could not be controlled with hypordermics of morphine pushed almost to the degree of narcotism. I advised the use of faradic electricity—used as indicated above, with decided improvement in thirty-six hours, and a cure in six or eight days. Within twelve hours half the quantity of morphine before given gave the patient comfort, and the quantity was daily reduced and soon withdrawn. There has been no recurrence in this case. The number of cases treated are insufficient to predicate an opinion, particularly as a large per cent. of primary cases recover any way, but the first case was unquestionably not only typical but severe, and the result was so satisfactory that I shall again use it should an opportunity present. No broad-minded physician would contend that faradic electricity can supersede the surgical methods found necessary in a large per cent. of their cases; but that a certain per cent. can, if seen early, be favorably modified and relieved without operative interference is not only possible but probable. In this class of cases faradic electricity has much to commend it. Antagonizing no other medication, easy of application, far-reaching in its effects, as its inter-polar action gives to it a power supremely above the ordinary topical applications, such as blisters, poultices and stupes, that only act as revulsants, and in small degree modify engorgement of the deeper structures by inviting the blood to the superficial channels. No one ever claimed more than this for them. How powerless when compared to the physiological effects of faradic electricity. Lastly, let me be understood as claiming only that faradic electricity is a valuable adjunct to the means already recognized for the treatment of disease, and demands more recognition than the profession are disposed to accord it. It cannot supersede medicine, nor can it take the place of surgery, but, like both, has a sphere where it can be used to advantage.

I have no patience with hobbyism whether used in connection with electricity medicine or surgery. It is foreign to the well-trained professional mind, ruinous to the physician who embraces it, and stamps the rider as one who is professionally unbalanced and a hindrance to progressive medicine. While this is true, there is, I regret to say, too much prejudice cherished, and too much abuse bestowed by the profession at large on those who have the courage of their

convictions, and dare to work in the rubbish, where in the past history of medicine many brilliant jewels have been found. Fashion in medicine, as elsewhere, reigns with arbitrary power, and a dread of its lash deters many from entering unexplored fields in search of new material. It has always been, and will continue to be so. As professional men, on whose wisdom, mature judgment and correct conclusions hang the destiny not only of the living, but of the millions yet unborn, it becomes us, if true to our trust, to lay aside prejudice, encourage investigation, and utilize any and all means that give hope of relief to suffering humanity. More than this cannot be demanded, less than this makes us recreant to a most sacred trust. No prophetic mind is necessary to discern the dawn of a new era, and with its advent will come greater sucess in medicine. I refer to the constantly increasing interest of the profession in the pathology of disease. It has on the profession today a stronger hold than ever before. Its first benign effects will be to revolutionize the treatment of the febrile state. Enlarged views on the pathology of fevers will sound the death knell for the present fashionable antipyretic treatment, that has no foundation in fact, is a delusion of the doctors, and hurtful to the patient. Not a decade hence the physician will recognize as a cause for febrile reaction some ptomaine, some ferment or some septic element in the circulation, and address his treatment to arrest, if possible; then to eliminate the noxious principle and finally fortify against its encroachments.

O. L. WILLIAMS, M. D.
Dallas, Tex.

In their essay upon Ectopic Gestation Cole, Jarman and Grandin say in regard to passing "powerful currents" through inflamed masses: "That any bad result has ever followed the use of the faradic current, even in cases of pus-tubes, has not been shown; neither has it ever been demonstrated that the faradic current has even caused suppuration in an inflammatory mass which did not contain pus." Nor could it be expected to do so unless it conveyed into the mass the pyogenic microbe. Galvanic and faradic applications are usually suspended when we meet pus, for the reason that it needs to be evacuated and got rid of, but the mild, sedative faradic application employed by Dr. Williams does not seem to be open to any objection which may have been raised against "powerful" currents by other writers. In cases of appendicitis with treatment restricted to medical procedure, the use of faradic sedation will, of course, neither prevent nor interfere with the most approved means of treatment at the physician's command nor with surgical aid should consent to it be obtained. This is an important point in its favor, and when coupled with the fact of complete harmlessness when applied as directed it would appear to warrant sufficient test to establish its value in this disease. My own personal observation and experience tend to confirm Dr. Williams' conclusions, and if others who may have had opportunities to employ faradic sedation in similar cases will report their results to the "Times and Register" they will very gladly be published for the advancement of electro-therapeutics. —Ed.

Surgery.

IN CHARGE OF

Dr. T. H. MANLEY, New York.

HERNIA: RESULTS OF EXAMINATIONS IN 10,000 CASES OF HERNIA, MADE DURING THREE YEARS.

BY M. BERGER, Le Mercredi Med., Oct. 20, '95.

From February, 1881, to same month in 1884, this author saw and examined at the "Bureau De Relief," in Paris, 10,000 cases of hernia, entered there for the treatment of this infirmity.

There were 7433 cases in males and 2567 in females. Inguinal hernia was present in 96 per cent. of males; 6.02 men this type was bilateral; the females, 4.166.

Inguinal hernia appeared on the right side about twice as often as the left; 476 were congenital. Crural hernia was present in 6.60 of all. In women, femoral hernia was present in 37.10—less frequent, however, than the inguinal, in the proportion of 1 to 1.35. The co-existence of crural and inguinal hernia was as frequent in one sex as the other.

Umbilical hernia contributed 5.46 of male herniae, to 27.34 in women.

Hernia through the median line and epigastric hernia were found much more commonly than is generally supposed—about one-half.

In the department of the Seine hernia was present in a ratio of about one in every 14 males, and one in every 44 females. The frequency of hernia varies with age, certain types prevailing at one epoch of life with greater frequency than another. In the first year inguinal hernia is most common; then it recedes in a large number, and is less frequent at the twenty-fifth year. From that age, for twenty or twenty-five years it is less frequent; then, after 50, all varieties are once more numerous. As to the complications and dangers of hernia, they are altogether more frequent in women than men in the proportion affected.

PUNCTURE OR INCISION OF THE PERICARDIUM IN PERICARDIAL EFFUSIONS.

BY M. M. DELORME AND MIGNON

For more than two centuries the question of incising or puncturing the pericardium in diseased conditions has been discussed. Riolan, the distinguished contemporary of Harvey, in 1746, practiced and recommended it. Desault and Larry, in the beginning of the nineteenth century, revived it. It is now something more than fifty years since Schuh, of Vienna, first successfully performed paracentesis, with a trocar for pericardial effusion. After this, evacuation by puncture was generally preferred, although Trousseau strongly recommended evacuation by incision.

But the results of operations were not satisfactory. The surgeon was called in late, the patient was in an enfeebled state; infection set in about the incision, and little benefit followed. Then Beizeau raised his voice against it; the alarm spread, and the operation was cast aside as of questionable value.

The anatomical difficulties in the way are much greater than are generally supposed. Hence, one must not be led into error by assuming that the same general relations obtain in the living that we would be led to suppose exist by a dissection on the cadaver. The heart is in motion; with each inspiration there is a sinking of the diaphragm and an overlapping forward of the pericardium by the parietal pleura. The relations of the left pleura with the thoracic wall are much greater than is generally set down in anatomical text books. The sterno-perichondro-pericardical area selected for incision in these cases is a highly vascular centre, deeply lodged under a dense, firm shield of structures.

With the safeguards which modern surgery provides, paracentesis for pericardial effusions has become a safe and valuable procedure in the hands of a skilled surgeon.

We should, however, neither advise nor practice it except under certain definite special circumstances. First, not until active medication, local and general, have failed; second, not before such great exhaustion has set in as to render doubtful reaction after operation.

In all cases when such symptoms of pyrexia set in as point to a purulent transformation of the serous fluid, a cardiac paralysis is threatened by hydrostatic pressure.

Intense dyspnea, quick, irregular pulse, deep cyanosis, a persistent, dull pain over the heart, with a restless state, indicate urgency.

We will usually find a surface edema of the integument over the precordia. Digital pressure over the intercostal space on the left side evokes pain also, over the course of the phrenic nerve.

In the child there is a vaulting of the ribs over the heart, but costal ossification prevents this in the adult. Percussion and auscultation point to the direction and extent of effusion.

This area varies considerably, according to the decubitus of the patient. Partensky has noted in some cases that the great distension of the the pericardium often renders deglutition painful or impossible by pressure on the esophagus. This symptom immediately passes off after the excess of fluid is drained away.

The question has been raised, "If, after the first evacuation of pericardial fluid, followed by relief, is it proper, as with the pleura, to repeat the tappings, or make an incision into the pericardium?" In our judgment there is little analogy between the pleura and the serous investment of the pericardium. Nevertheless, in some cases it is the proper course to pursue. We have knowledge of 25 cases treated by repeated aspiration. In five, a free incision was made, four recovering. Of the other 20 treated by aspiration only, 18 died—Revue de Chirurgie, No. 10, Oct., '95.

Note by translator.—The author enters at considerable length and with great fullness on the details of the anatomical topography, with illustrated plates and descriptive text.

T. H. M.

THE ORIGIN OF THE STITCH ABSCESS.

(Beitrage zum Centralblatt fur Chirurgie, No. 27, 1895.) By Dr. C. Lanenstein, of Hamburg.

The author's attention was attacted to the study of this matter by the observation of infection occurring after aseptic operations, which could only be explained by supposing the infection to be due to suture or ligature material. Consequently, he instituted bacteriological examination in the cases of 216 specimens of sutures and ligatures. In these 216 specimens he found 64 which contained bacteria that were capable of development. The majority were bacillus subtilis, which was found in different culture media, including gelatin, glycerin, agar, bouillon, blood serum, and alkaline albuminate. He also found the micrococcus tetraginus and the staphylococcus albus. The author comes to the following conclusions:

1. Clinical observation teaches that cases of suppuration occur which have their origin in the catgut employed in the wound.

2. It cannot be said for certain in any individual instance that the catgut has been the bearer of the infection.

3. It is nevertheless certain that the so-called sterile catgut of the shops contains germs capable of development.

4. So long as this is the case, the catgut cannot be free from the suspicion of having given rise to the infection of a wound.

In the discussion which followed, Kocher, of Bern, said that since 1888 he had used silk in his enucleations of goitre. This can be absolutely sterilized either by dry or moist heat, an impossibility with catgut. In referring to his cases he had only 35 per cent. heal by primary union while he used catgut, while 85 per cent. healed in that manner since he began to employ silk. Kocher believes that the suture material should be not only aseptic, but also antiseptic, and has, in consequence, during the last winter kept it in a solution of arsenious acid, with the result that he has, in 35 cases in which it was employed, secured absolute primary union.

THE RADICAL TREATMENT OF HYDROCELE BY THE INJECTION OF IODINE, AND ITS FINAL RESULTS.

(Beitrage zur Klinische Chirurgie, Heft 3, Band xiii., 1895.) By Dr. Spahinger.

After a careful comparative study of the methods employed for the radical cure of hydrocele, both by incision and by the injection of iodine after puncture and withdrawal of the fluid, the author comes to the conclusion that, in every case, that operation is to be performed which produces the least functional derangement, which has the shortest course, and which has the least chance of unforeseen complications.

Puncture with the injection of iodine, he believes, fulfills these conditions more nearly than any other method, although it has a greater

percentage of relapses. It should be used in all normal cases, the operation by incision being reserved for persistent and complicated cases.

The author bases his opinion on results obtained in the Zurich clinic. Of 70 cases treated, 48 were injected with iodine; 30 were cured, five relapsed, and 13 were not heard from later. The average length of time in the hospital was fourteen or fifteen days. Of 17 cases treated by operation 12 were cured. No relapses were seen, although five cases were not heard from. The time spent in the hospital was, however, on the average from 38 to 42 days.

THIRTEEN FEET OF INTESTINE TORN AWAY.

A few weeks ago I was called to see a lady who had either performed an abortion on herself, or some one had done so for her. The fetus had been delivered, but the placenta remained in the cavity of the uterus. A physician was called, who discovered something protruding from the os, and, upon investigation, found it was an intestine. There was considerable hemorrhage and very severe pain, with the prospect of speedy death. I found the pulse and respiration very rapid and a profuse hemorrhage from the vagina. As soon as possible I opened the abdomen, and found the uterus about the size of a five-months' pregnancy and very soft, the abdominal cavity quite filled with blood. Upon lifting the uterus out I discovered, on its posterior surface, an opening, through which passed a loop of small intestine. This I immediately withdrew; its mesentery had been stripped entirely off. One end of the intestine had been torn from its attachment to the cecum. I inserted my finger into the cavity of the uterus, and, finding the placenta, delivered it, enlarging the opening. I cut off the intestine at the point where the mesentery stopped, making a lateral anastomosis with the cecum on the opposite side. I then closed the wound. Thirteen feet of the intestine had been drawn through the opening in the uterus. The patient died at 12.30 A. M., one remarkable feature being that she survived the injury and subsequent operative procedure over eight hours. —Dr. C. B. Nichols, in Occidental Medical Times.

BURNS TREATED BY STRONG CARBOLIC ACID.

Dr. Benjamin H. Brodnax, of Broadnax, Louisiana, write to the Popular Science News as to above bold line of treatment of burns and scalds: "Take pure, undiluted carbolic acid; with a feather or fine brush paint the burned or scalded surfaces, extending a little over the edge, where the wounded surface is not bare. Pain instantly ceases, and if care is taken no other dressing is required but a light tissue of lint cotton, and one roll of bandage will insure from contusions, etc." Dr. O. H. Allis, who read the original article, sent him by myself, before the Philadelphia County Medical Society, March 10, 1894, remarked: "To my mind it is one of the boldest ventures in all surgery. To think of applying to a raw and agonizing burn that which would scald a healthy cutaneous surface would seem to the unreflective mind a reckless and cruel act. But when we consider that a raw burned surface is painful from its exposed nerve filaments, and that the strong acid, combining with the albumin of the tissues, forms a coating that excludes the air, while at the same time it benumbs—paralyzes—each terminal exposed filament, the remedy seems to be the result of a happy inspiration."

DISAPPEARANCE OF TUBERCULOSIS OF THE PERITONEUM AFTER OOPHORECTOMY.

Wahlstrom (Nouvelles Archives d'Obstet. et de Gynec., September 25, 1895) publishes another interesting example of this singular clinical phenomenon. On January 29, 1892, the appendanges of a woman, aged 27, were removed. It was then discovered that there was extensive tuberculous peritonitis especially towards the pelvis. The patient regained her health after the operation. But empyema set in, and she was tapped on October 7, 1893. She died on November 23. The pelvic viscera were found free and

covered with a smooth, shiny serous coat. Higher in the abdomen there were adhesions. The empyema communicated through the diaphragm with a fistulous opening in the abdominal cicatrix.

Gynecology and Obstetrics.

HEREDITY OF TWIN BEARING.

Von Speyer (Mittheilungen aus Kliniko und Med. Instituten der Schweiz., 1st Series, Part 11, 1895) detected hereditary tendency in eight out of a series of twin bearers under his observation during the past ten years. In one patient it was found that four generations in her family had borne twins. In several the twins showed feeble vitality and died almost simultaneously soon after birth. Twin bearing does not seem particularly related to the prime of the generative period, nor to its earlier or later stages. In some families already blessed with twins, triplets and quadruplets were born. These rarer forms of multiple pregnancy are undoubtedly hereditary.

MISSED LABOR.

Stahl (Der Frauenarzt, October, 1895) relates a case in which he feels sure that labor was missed, and where he afterwards induced a kind of secondary "premature labor," as he terms it—or, in more usual terms, he delivered a fetus which the uterus refused to expel. The patient was intelligent. Her pelvis was contracted by prominence of the sacrum. Three labors had been normal, and only lasted some two hours each; a fourth had been more lingering, and a very big child was delivered at term. Labor pains, very distinct, set in at term in the fifth pregnancy. For three hours the uterine contractions were strong and regular; then the intervals grew longer and the pains weaker, until they ceased. When 302 days had elapsed after the last period Stahl found the patient inconvenienced by the great size of the abdomen, so he turned and delivered a very well-developed fetus, which was alive at the beginning of the delivery. The prominent sacrum gave great trouble; the perineum was badly torn owing to the great size of the fetal head; ossification of the cranial bones had advanced very far, and made the parts incompressible. The fetus weighed 12 pounds 8 ounces. the placenta and membranes 2 pounds. The measurements of its head were: Circumference, 16 inches; occipito-frontal diameter, 5.8 inches; bi-parietal, 5.2 inches; bi-temporal, 4.6 inches. The perineum and the rent—nearly an inch long—in the rectum were sewn up at once, and the mother made a good recovery. No uterine disease nor rectal trouble ensued.

THE TREATMENT OF PUERPERAL CONVULSIONS WITH VERATRUM VIRIDE.

It was an interesting and profitable discussion that followed Dr. Charles Clifford Barrow's recent accounts of two cases of puerperal convulsions in the treatment of which the use of veratrum viride had played an important part. It took place at a meeting of the Society of Alumni of Bellevue Hospital, held on October 2, and a report of it is presented in this number of the Journal. Dr. Barrows properly laid stress upon the use of veratrum viride in the treatment of puerperal convulsions—not that he fancied it was new, but rather, we presume, that it seemed in danger of being forgotten, for he says, except for its enthusiastic advocacy by the late Dr. Fordyce Barker, he had not noticed that it was generally appreciated except in the Southern States. The discussion shows at least that the gentlemen who took part in it had not ignored the title of the remedy to be ranked high among the means of controlling the convulsive disorder under consideration.

Dr. Edgar's declaration that he did not believe there was any drug, with the possible exception of chloroform, that was of as much value as veratrum viride in eclampsia, coupled with Dr. Chandler's testimony to its efficiency, goes far to show that experienced obstetricians in general are less forgetful of the virtues of

veratrum than its comparative inconspicuousness in current literature might lead one to suppose was the case. It is very sure that an overwhelming preponderance of our therapeutical resources does not reside in the novelties that have been introduced so profusely within the last few years—perhaps no preponderance at all. Although, not to mention the wholly novel medication to which bacteriological study has given rise, all our pure hypnotics and all our pure antipyretics have been known but a few years, it is much to be doubted if we have come to a knowledge within the last twenty-five years of a greater number of potent curative medicinal agents than were known before. It is natural and inevitable that the new drugs should figure more prominently than the old ones in periodical literature. We would not have it otherwise, for that would be a poor literature that should keep on reiterating well-known facts. There is room for discrimination, however; it is hardly to be gainsaid that occasionally a particular use of an old drug is in danger of being forgotten, and when that is the case a distinct service is rendered by whoever calls attention to it so pointedly as Dr. Barrows has to the value of veratrum viride in combating so fatal and frightful a disease as puerperal eclampsia. Such a course sets those who may have been forgetful or skeptical to making new trials of the agent in question, and may lead either to an undeniable confirmation or to a wholesome refutation of the convictions of our predecessors. It tends to certainty in therapeutics, which is the grand aim of medicine.—N. Y. Med. Journal.

WHEN MAY GONORRHEICS MARRY?

The question when may syphilitics marry has been often discussed and answered. The inquiry now is turned toward the victims of chronic gonorrhea. Dr. Lowenhardt asserts that the prospective bridegroom should be subjected to repeated examinations in order to determine the presence or not of the gonococcus. A slight secretion is not sufficient for this purpose, but the urethral mucosa must be irritated in such a manner as to place it in analogous condition (excess in baccho et venere) to those which light up an indolent case. The best means to obtain this result is to inject a few drops of a one-fifth per cent. solution of silver nitrate. If, then, the secretion contains no gonococci, but is strictly made up of epithelial cells, marriage can be permitted. The presence of numerous pus corpuscles necessitates renewed examinations and treatment of this pseudo-gonorrhea. Lowenhardt insists upon the fact that the gonococcus is alone responsible for the virulence of the exudate and the serious results that follow inoculation with it in the genital apparatus of women. —N. Y. Med. Record.

ANTITOXIN TREATMENT OF SYPHILIS.

Dr. Vievorovsky has been employing antitoxin serum in the treatment of syphilis, in the Moscow Military Hospital, and claims to have observed most satisfactory results.

Miscellany.

There is no malarial parasite, says Surgeon Lawrie, of the British Indian Medical Service. He affirms that the microscope is misleading and useless in the diagnosis of malaria, and that there is no parasite in the blood in that disease. "There is nothing in pure blood but hemocytes and leucocytes—red corpuscles and white cells." The so-called parasite of malaria is nothing more than the blue-stained nucleus of the white blood-corpuscle. It is stated, further, that the appearances which Laveran and others have pronounced to be malarial parasites are to be found in the blood in health and disease.

VARICOSE VEINS.

Instruct the patient to carry always a tight ball. In case of rupture and consequent hemorrhage it re-

quires no skill to apply the ball to the point of rupture and bind down tightly with the handkerchief. This will in all cases preserve life and strength until the arrival of the physician.—Hirst, Medical Record.

NAVY CHANGES.

Changes in the Medical Corps of the United States Navy for the week ending November 23, 1895:

November 19—Medical Director P. S. Wales ordered to duty as member of the Retiring Board, Washington, November 25, in addition to his present duties.

November 22—Passed Assistant Surgeon R. P. Crandall detached from the Naval Laboratory and ordered to the Naval Hospital, New York.

Passed Assistant Surgeon Philip Leach detached from the Naval Hospital and ordered to the Naval Laboratory, New York.

I have used Cactina Pellets for several years past, with the most satisfactory results, in such cases wherein they are indicated.—A. H. Ohmann-Dumesnil, A. M., M. D., St. Louis.

Wayside Notes.

By ERNEST B. SANGREE, A. M., M. D.

The other day I had an interesting case showing heredity in vascular weakness and degeneration. It was that of a very robust, but rather heavy and florid-looking gentleman of 33. His father, his grandfather and his great-grandfather had all died of apoplexy, and his father's mother suddenly of heart disease. On his mother's side there was no history of arterial degeneration. When 12 years of age the applicant had a sudden sunstroke while up a cherry tree, fell down unconscious and remained so from acute meningitis for some five weeks. When 15, another boy struck him on the forehead with a good-sized stone. Again he fell unconscious and lay for six weeks, with acute inflammation of the brain membranes. At 19 he had diphtheria, followed by acute nephritis of the most violent kind, so that his life hung by a thread. A small sister of 5 fell, striking her head on the floor. In a few days she went into fatal convulsions, doubtless from brain pressure due to ruptured blood vessels, as a purple area appeared after death over the spot of injury. Another child could probably have received the same fall without anything more than temporary injury, but in this case the lesion was beyond nature's ability to repair.

BOOKS AND PAMPHLETS RECEIVED.

Surgical Treatment of Laryngeal Tuberculosis. By J. W. Gleitsmann, M. D. Reprinted from N. Y. Medical Journal.

Hyperthermy in a Man up to 148 Degrees F. By A. Jacoby, M. D. Reprinted from the Transactions of the Association of American Physicians, 1895.

Official Management of Dangerous Communicable Diseases. Printed by the Board of Health, Philadelphia.

Epidemic Influenza—1889 to 1895. By W. L. Stowell, M. D. Reprinted from Archives of Pediatrics.

"The History of Oratory from the Age of Pericles to the Present Time," by Professor Sears, of Brown University, will soon be published by S. C. Griggs & Co. It purports to give a connected account of the origin and growth of oratory as an art and as a science—especially of forensic, deliberative and patristic oratory—and shows that there is a philosophy of discourse based on mental and moral action, and exemplified in the successes and failures of representative orators through many centuries. The general principles of public speaking are given, with some conception of its highest attainments.

It is believed that no other work has attempted to give the art, the history, in a single volume, thus making this book of more than ordinary value to clergymen, lawyers and public speakers of every description. The sound scholarship of its author should make it especially available for use by students of oratory in the larger universities and colleges.

The Times and Register.

Vol. XXX. No. 24. Philadelphia, December 14, 1895. Whole No. 901.

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Original.

A PRACTICAL STUDY OF THE BLOOD AND THE CIRCULATION, WITH A HISTORICAL REVIEW OF THE SUBJECT AND ITS BRIEF CONSIDERATION FROM THE STANDPOINT OF ITS CHEMICAL COMPOSITION, ANATOMICAL STRUCTURE, AND PHYSIOLOGY; INCLUDING CLINICAL STUDIES, AND EXPERIMENTAL RESEARCH ON THE LOWER ANIMAL.

BY THOMAS H. MANLEY, M. D., NEW YORK.

Continued from last number.

PART XIII.

ON THE CONTRACTILITY OF THE CAPILLARIES.

In the study of biology we learn that one of the fundamental characters of all living matter is its property of spontaneously changing form, of improvement, however limited in extent this may be. In the young plant or animal this is more pronounced than after degenerative changes begin, and, in speaking of the vascular system, Fabricus declared, that eliminating acquired disease, a man lived as long as his blood-vessels. In the senile state, or in localized degenerations, primary dissolution begins in the capillary areas of the vascular system; in different structures and in various stages of life. With many, these senile changes first seize on the scalp, destroying the hair follicles and the sebaceous crypts, while in others, the more vital centres within the skull are starved into premature decay and softening by those same atrophic changes as in the vessels of the overlying scalp. The study of the vascular senility, as it applies to structures and the organs is one of most attractive interest to the student of pathology. But, where is the primary seat of those changes; in the larger vessels, the capillary or the blood itself? We will later return to this topic, and now bring to a close the consideration of the question of the contractility of the capillary.

It has been previously stated that under the influence of emotion, by a reflex action, through the vasomotor nerves, the terminal capillaries suddenly empty themselves, and thus, deprived of their corpuscular elements, fade from sight,not even a trace of their outline being left. This phenomena would most certainly imply active contractility of their walls; for, after being emptied of their blood, a vacuum is formed and a general collapse succeeds. But do they in any degree contract on their contents after the manner of the arteries? No such proofs have appeared to me while the blood circulates through them, though that they may, in limited districts, take on spasmodic contraction, under pathologic conditions is indisputable.

Shortly after the forcible injection of a minute quantity of methylene-blue in a frog, I watched for evidence of its absorption and dissemination through capillaries of the webbing. After a while, minute globular specs of deep blue began to flit by, but this had not continued long, when suddenly, here and there, the longest capillary pores commenced to take on the most remarkable and rapid gyrations. The whole vessel would quickly shorten, elongate,

twist on itself, move in serpentine directions, rest and start, to again halt, until all movement would cease and the corpuscles, until now, notwithstanding this commotion, moved steadily on, gradually came to a rest; when, finally, as fresh files arrived, they were stopped or turned aside into other open vessels.

This display on the part of the capillaries demonstrated that under the influence of morbid conditions the capillary is capable of extensive and varied movements.

It will be observed, however, that although, those intestine-like motions were pronounced, still the bore of the vessels remained the same, without any evidence of its diminution or enlargement.

It is probable, that when the blood is finally discharged into the finer capillaries, all contractile impulse ceases, and now, the continuances of the circulation is maintained by other factors; by new forces evolved, of an intrinsic order.

Until Kolliker and others discovered the amoeboid and wandering character of the leucocyte, physiologists passed over this strange body as simply a "white blood corpuscle;" but later studies have proven that it possesses several marvelous functions; and, indeed, with our present knowledge, the question may be raised whether its presence in the blood in health is anything more than accidental. It seems quite capable of taking care of itself, independent of vascular motion, and may be seen leisurely leaving and returning through the walls of the capillary. Leucocytes have been said, by some authorities, to be quite identical with pus-corpuscles, although Heitzman, with several other eminent investigators, emphatically deny this; and any one who has made a study of hematology by modern methods can readily convince himself that this theory has little to support it. Diapedsis or transmigration of the white globules takes place in the finer capillaries of their own accord, and probably is in no manner influenced by motion, in the walls of those vessels. But red corpuscles and the immature, or the hematoblasts, are also found in considerable numbers, in the thoracic ducts, before they empty their contents into subclavian veins.

Some have believed that this sanguinous admixture was accidental and was caused by an escape of the venous blood into the lymph-duct. But it has been formed in the finer off-shoots of the absorbents, into which it must have migrated directly from the capillaries.

We have then, as accessory to capillary propulsion, corpuscular movement, both in the vessels and outside of them.

In the skeletal vessels chemic action of the blood is restricted to comparatively simple changes; as is little more than the liberation of oxygen and the absorption of carbonic acid gas. But, in the glandular organs as the pulmonary, hepatic and renal, wherein depuration of the blood takes place and new elements are formed, the most complex chemic changes occur; ferments are elaborated, acids, gases and alkalies, not pre-existing in the blood, are generated, resorbed or eliminated. Attendant on these molecular changes is the creation of new forces. Chemic force, therefore, may be added to automatic corpuscular movement, as a factor, in the capillary circulation. Independent of, yet intimately associated with these, are what may be well designated vital action, that impalpable something of which we are cognizant, but all of us know nothing.

If it be allowed that even with the fresh light which science has shed on the study of the capillary-circulation, that the forces which maintain its motion are not, by any means, proven, we might direct attention of the critic to the very centre of circulation, and assure him that the same vital influence which provides the needed force there is extended to the capillaries; for there certainly is not any physical or anatomical explanation of that great and ceaseless force, which, during our existence, keeps the cardiac pump in incessant motion. It won't do to tell us that it is dependent on nerve influence alone, for the heart will continue to act after its nerve supply

is cut away, nor can it be said that its vitality is derived from its vascular supply, as the coronary arteries are totally inadequate to provide the necessary pabulum of this powerful engine. Besides, in many of the cold-blooded reptalia, the heart continues to beat hours after it is entirely removed from the body. And thus it is with the capillaries that the innate vital endowment which they possess not only enables them to carry on their functions, but likewise to resist in a marvelous degree the consequences of injury, disease or other destructive agencies. As, for example, when a part, as a limb, is frozen through and all the fluids congeal in one icy mass, by cautious measures animation and function return, the glimmering spark, though dormant, needs but the opportunity to rekindle life in those tissues on the verge of dissolution.

That the capillary is quite independent of central force for its circulation we may infer from analogy, or by comparison with organized vegetable bodies, which preserve an active circulation of the sap, entirely by forces generated in the processes of growth and development. The same may be said of many of the lowly organized beings of the animal world. Some have nothing more than a rudimentary capillary structure. In many fishes we find the blood of the veins and arteries freely mixing, being moved by a long diverticula, extending on either side of the spine. Differentiation of the vascular organization being only seen in the more highly organized animals.

Capillary Stasis.—It has been previously stated that we have reason to believe that the circulation is not equally energetic in all the capillaries at the same time, and that, under various circumstances and conditions, in limited areas at varying intervals it is quite motionless.

Now, when we in any manner, either through nervous impressions or mechanical pressure, embarrass the general or local circulation, for example, by the sudden application of cold, by pressure on the limb, or by fright, the corpuscles in the intermediate capillaries entirely cease all movement for the time, though, while this stasis remains, when of but short duration, little or no change can be distinguished in the corpuscles, except an increase of migration of the leucocytes out into the peri-vascular and lymph spaces. After the causes which lead to the arrest of motion are overcome, one by one, the files of corpuscles begin to move, until, in a short space, but few remain motionless. But when pressure is continued beyond a certain limit then such an escape of the aqueous elements of the plasma follows as to blur the field so that motion can only be discovered in the larger arterioles, the state known as edema is setting in, and in transudations of the capillaries from sudden vascular compression there is generally more or less coloring of the effused substance by an admixture of hemoglobin, which passed out after the red globules began to break.

This constitutes a deviation from normal function which will be considered more in detail when pathological stasis is taken up.

The only thing which is now intended to make clear in this connection is that, in any condition which interferes with the free circulation in the extremities, the capillaries are the first to show signs of stagnation, and are the last to move the corpuscles onward in the full re-establishment of the general circulation

(To Be Continued.)

CLINICAL REPORTS ON TRIONAL.*

BY DR. F. A. A. BOUDEAU, OF PARIS.

The following cases, observed by me in the service of Dr. Gaillard at the Hospital de Tenon, serve to illustrate the various uses of trional as a hypnotic and sedative.

1. INSOMNIA DUE TO PAINFUL AFFECTIONS.

Case I. Henri D., butcher, 40 years old, suppurating hydatid cyst,

* Thesis presented to the faculty of medicine of the University of Paris, 1895.

with very violent pain which at the time of his admission to the hospital supposed to be due to hepatic colic.

March, 23, 1895. Four hours sleep from a hypodermic injection of a modern dose of morphine.

March 24. Took one gm. of trional at 7 o'clock in the evening, and slept from half past 8 till 1 o'clock. One half an hour later fell into a sleep which lasted till 6 o'clock in the morning. The sleep was quiet without nightmare, and the patient awoke feeling well.

March 25. Did not take trional. Sleep lasted about three hours, restless and suffering a good deal of pain.

March 26. Took one gm. of trional at 7 o'clock. Slept from half past 7 until 5 in the morning, the sleep being sound, without nightmare. On waking, patient felt rested, and had no disagreeable sensations.

March 27, 28, 29 and 30. Continues to take one gm. of trional, and sleeps on an average eight hours.

Aphil 1. Did not take trional. Suffering a good deal and could not sleep.

April 2. Took one gm. trional, and slept nine hours.

April 3. The patient was transferred to the surgical service.

Each time that the patient took one gm. of trional he slept from eight to nine hours on an average, and was more comfortable during the day time. On the contrary when he did not take it he suffered a good deal and was not able to sleep. No inconvenience was ever noted from the medication.

Case II. Fernand D., tinsmith, 17 years old, attack of lead colic, which prevented the patient from getting any sleep whatever.

March 25. One gm. trional at 7 o'clock. Slept from 9 till 11, and again from 2 till 4. The sleep was disturbed by nightmare. Pulse, 70.

March 26. One gm. trional at 7 o'clock. Fell asleep at 8 o'clock and woke at 4. The sleep was profound, but broken by nightmares. Lumbar pains on waking. Pulse, 95.

March 27. One gm. trional at 7 o'clock. Slept from 8 to 6. He woke once during the night, but went to sleep again immediately. Pulse, 96.

March 28. Did not take any trional. Slept well for eight hours.

March 29. Did not take any trional. Slept for two hours restless.

In this case an average sleep of eight hours was obtained from trional, without causing any secondary disturbances.

Case III. Claire B., 40 years old, domestic attacks of mild hepatic colic which have prevented sleep for fifteen days. From time to time she was able to obtain a nap for half an hour or so, but was soon waked by the pain.

Bromide of potassium was given in doses of two grams for several days without effect.

One June 20 she took one gm. trional at 7 o'clock and slept from 9 o'clock until 5 in the morning, waking only once, and then going to sleep immediately. From that time she continued to take one gm. trional, obtaining an average sleep of seven hours.

No disturbances were noted, except that during the last few days there was a little diarrhea.

Case IV. N., 45 years old, suffering from a neuralgia of the diaphragm, which prevented her from sleeping more than one or two hours each night. For several days two grams of bromide of potassium was given without success.

On June 18, at 7 o'clock, she was given one gm. trional. She fell asleep at 10 o'clock and rested till 3 o'clock, when she woke and immediately fell asleep again until 5 o'clock. Some nightmare; on waking there was malaise, her head was heavy and she staggered a little, but these symptoms disappeared rapidly.

June 19. Took one gm. trional at 7 o'clock. Slept from half past 7 o'clock until 5 o'clock, rising once to pass water, but fell asleep again immediately.

On waking the same disturbances as the day previous, so that she was obliged to lie down again for a few minutes, but the symptoms soon disappeared.

The hypnotic action continued throughout the day, during which she slept pretty soundly. The pains

are less violent even during the day time than they were the day before yesterday.

June 20. Took one gm. trional at 7 o'clock. Slept from 9 o'clock until midnight, when she was waked by colicky pains, having taken on the previous morning a purgative which had up to this time failed to act. She subsequently slept from 3 to 5 o'clock. On waking, no further unpleasant symptoms.

Case V. N., suffering from lymphangitis of the arm, which caused a good deal of pain and prevented him from sleeping. Took one gm. of trional for two nights in succession and slept for nine hours the first night, and seven the second.

2. INSOMNIA IN CARDIAC DISEASES.

Case VI. Joseph M., metal-cutter, 69 years old, with aortic insufficiency and albuminuria, edema of the legs and edematous rales at the base of the lungs; sleep impossible on account of the marked dyspnea. Pulse, 110.

March 24. Took one gm. trional at 7 o'clock. Did not actually sleep, but there was a little drowsiness for two hours. The general condition remained bad, but was not aggravated. Pulse, 120.

March 25. Took the same dose with the same lack of result.

March 26. Did not take any trional. Slept soundly from a hypodermic injection of a moderate dose of morphine. Pulse, 92.

In this case trional was shown to be inferior to morphine. It had, however, no bad effect upon the heart.

Case VII. Yvonne M., day laborer, 54 years old, mitral insufficiency with enlarged liver; several attacks of jaundice; usually sleeps about five hours each night; restless and wakes two or three times to pass water.

Her first experience with trional was on the 5th and 6th of February, when she took one gm. each evening, sleeping about eight hours and twelve hours respectively. The sleep was profound and accompanied by nightmare.

March 17. Took one gm. trional at 8 o'clock. Up to 10 o'clock there was no special effect. At this time her vision became disturbed, the head felt heavy and there was a ringing in the ear. At 10 o'clock the patient yielded to an irresistible drowsiness and slept until 4 o'clock. The sleep was heavy, but without nightmare.

On waking she had pain in the loins, headache, a little drowsiness, noises in the ears with pretty marked deafness, and a little uncertainty in walking.

March 18. Refuses to take trional on account of the disturbances just mentioned. The disturbances of vision, hearing and the headache gradually diminished, but did not disappear for several days.

Case VIII. N., 45 years old, mitral insufficiency. Has not slept for some time on account of the feeling of oppression. Took one gm. trional for five days in succession. Sleep came on after an average interval of two and one-half hours and lasted six hours. It was somewhat restless. No disturbance nor any bad effect upon the heart.

Case IX. N., 30 years old, mitral insufficiency, compensation well established. Does not sleep at all.

During eight days took one gm. trional each evening, and slept on an average two to four hours each night. The sleep was intermittent, but the patient was very much relieved by it. No disturbances and no injurious action upon the circulation.

3. INSOMNIA DUE TO FEBRILE AFFECTIONS.

Case X. Francois P., day laborer, 57 years old, left lobar pneumonia, with frequent cough and abundant expectoration. Sleep impossible. Pulse, 95.

March 24. Took one gm. trional at 7 o'clock. Fell asleep at 9 o'clock, and woke at 5 o'clock in the morning, feeling very tired. He was awake two or three times during the night, but only for a short period. He had a good deal of nightmare. Pulse, 90.

March 25. Took one gm. trional at 7 o'clock, and slept from half past 7 till 1 o'clock only. The sleep was disturbed by nightmare. General condition very bad. Pulse, 140.

March 26. The trional was stopped on account of the seriousness of his

condition. Pulse, 140, and thready. No sleep.

March 27. The patient died. In this case the trional gave an average of six to seven hours of sleep.

4. INSOMNIA DUE TO A NON-FEBRILE PULMONARY AFFECTION.

Case XI. Madeleine T., 64 years old, attack of pulmonary congestion without fever. Insomnia due to frequent coughing. The patient has only slept on an average five hours each night for the past week. No nightmare.

March 11. Took one gm. trional. After two hours had a continuous sleep of six hours, but it was broken by nightmare. Awoke feeling somewhat tired and with a tendency to drowsiness.

March 12. Sleep of the same character coming on one hour after the administration of the drug and lasting seven hours.

From March 13 to 17 did not take any trional, and slept on an average five hours each night.

March 17. Took one gm. trional at 7 o'clock. Slept from 9 o'clock till 5 o'clock in the morning, with nightmares. On waking the head was heavy, there was headache, nausea, no staggering.

March 18. Trional stopped. Slept soundly from 9 o'clock till 4, no nightmare; felt rested on waking.

March 19. Slept soundly from 8 o'clock till 4, without nightmare.

Case XII. Jean C., carriage cleaner, 43 years old, bacillary phthisis. His cough was so constant that he could only obtain one or two hours sleep each night, and it was disturbed by nightmare.

March 19. Took one gm. trional at 7 o'clock. Slept from 9 o'clock till midnight, and again from 1 till 4 o'clock. The sleep was interrupted by nightmare, and the patient awoke tired and with a tendency to sleep.

March 20. Took no trional, and was awake the entire night.

March 21. Took one gm. of trional at 7 o'clock. Slept continuously from 10 o'clock in the evening till 4 in the morning. Some nightmare; a little tired on waking.

March 22. Took one gm. of trional at 7 o'clock. Slept soundly from 9 o'clock in the evening till 5 in the morning, followed by a little pain in the lumbar region.

March 23 and 24. The same result as on the previous day.

March 25. Left for Vincennes.

The average amount of sleep has been seven to eight hours. The only comment is that the restful effect was not as great as would have been obtained from a natural sleep of the same duration.

Case XIII. L. M., bronze-founder, 25 years old, pyo-pneumo-thorax; general condition very bad; night sweats. Complete insomnia, notwithstanding the administration of pills containing opium and hyoscyamus.

March 25. Took one gm. of trional at 7 o'clock. Slept from 8 o'clock until 2 in the morning. The sleep, which had been somewhat restless, was not resumed. Nevertheless the patient felt rested on waking.

March 26. Took one gm. trional at 7 o'clock. Slept from 7.30 until 4 o'clock. Sleep restless, and bad pain in the back on waking.

March 27. Trional stopped.

Case XIV. Leon L., jeweler, tuberculous. Remains in a drowsy condition throughout the entire night without actually sleeping. The cough is frequent.

March 12. Took one gm. trional. Half an hour afterward he fell into a good sleep, lasting eight hours, with two or three interruptions. No nightmare. Cough a little less frequent. Awoke rested and comfortable.

March 13. Took one gm. trional. Two hours later slept for six hours, but not continuously. Woke with nausea, headache; and then two hours later fell asleep for two hours, waking rested, the various disturbances having disappeared.

During the week following the same results were obtained, the action of the drug continuing for one night after its administration was stopped.

The average duration of sleep was eight hours.

Case XV. N., 25 years old, tuberculous, with pneumo-thorax very cachechtic. Sleeps only about two

hours each night. Spends the rest of the time in coughing. Has taken chloral, sulfonal and opium without the least result. For about a month he took 50 centigrams of trional and fell into sleep on an average three hours later, the effect lasting about four hours. Although the sleep was disturbed the patient was somewhat rested by it. In this case the trional never caused any unpleasant symptoms.

Case XVI. N., emphysema. Sleeps only about one hour each night, coughing the rest of the time. Has taken opium without any advantage. For twenty days took one gm. trional, and on an average one and a half hours later experienced a quiet sleep, lasting four to five hours. Never any unpleasant symptoms.

Case XVII. Abel A., 19 years old, pasteboard-maker, suffering from pleurisy on the left side. Does not sleep more than one hour each night. During the remainder of the time he is so restless that he cannot remain in bed on account of the severity of the pain at one point in his side.

June 19. Took one gm. trional at 8 o'clock. Slept from half past 11 until 4 o'clock; the sleep being sound and quiet. On waking, felt rested, and had less headache than usual.

June 20. Took one gm. trional at 8 o'clock. Slept very well from midnight until 8 o'clock. No disagreeable symptoms on waking.

The same medication was continued for five days, the sleep lasting on an average seven hours, without any bad effects.

5. NERVOUS INSOMNIA.

Case XVIII. Louis V., sculptor, cerebral softening. Patient is very restless, and walks about the room in the middle of the night.

March 18. One gm. trional at 7 o'clock. Was quite as restless and sleepless as on the preceding nights.

March 19. Two gm. of trional at 7 o'clock. Slept from 10 o'clock till 4 in the morning, waking several times. He was less restless, although still somewhat talkative during his wakeful moments, but was quieter during the daytime.

March 20. Two gms. of trional at 7 o'clock. Slept from 9 o'clock till 5. He was a little more quiet than last night.

March 21. Two gms. trional at 7 o'clock. Slept from 9 o'clock till 6. The patient was very quiet and did not wake at all. He was much rested in the morning, and remained quiet during the entire day.

March 22. Took only one gm. of trional. Still very quiet.

March 23. Took one gm. trional. The patient was a little more restless than the previous evening, as well as during the following day.

March 24. Took the same dose. The restlessness increased, and the sleep was reduced to three or four hours.

The administration of trional was then stopped. In this case there were never any bad symptoms following the remedy, but it was manifest that the dose of one gramme was quite insufficient to give any result.

Case XIX. Marie G., burnisher, 21 years old, subject to attacks of minor hysteria, without loss of consciousness, coming on almost every morning and evening. She awakes almost every morning with a headache, which persists in a diminishing degree throughout the entire day. When there are no evening attacks she sleeps calmly for nine hours. After an evening attack she has a very restless sleep for seven to eight hours, which is interrupted by sudden startings. No nightmare.

March 16. She has had a slight attack at 4 o'clock, and is very excited. The taking of one gramme of trional at 8 o'clock was followed immediately by nausea. She slept continuously from half past 8 till 5 o'clock, was restless, but had no nightmare. On waking felt rested, with no tendency to drowsiness and no more headache than usual. During the following day there was none of the usual attacks.

March 17. No trional. Had six hours of quiet sleep. But four hours after waking had a slight attack, the only one during that day.

March 18. Took one gm. of trional at half past 7. Only slept about one hour, beginning at 2 o'clock, and awoke with lumbar pains. Neverthe-

less the day following was quiet and free from attacks.

March 19. Took one gm. trional at 7.30. Slept from 8 o'clock till 1. The sleep was light, the patient awaking at the least sound, but falling asleep again immediately. When she awoke at 1 o'clock, she was restless, felt compelled to walk about, and had a peculiar sensation of heat with urgent thirst.
had a peculiar sensation of heat with urgent thirst.

Although the patient was tired, she was more quiet during the next day, and there were no attacks. The trional was then continued for six days with the same result. The average amount of sleep was about six hours, but it was somewhat disturbed and did not give very much rest; on the other hand, although the trional was given in small doses, it seemed to exercise a very favorable influence on the number of attacks.

Case XX. Louise H., day laborer, 43 years old, slight attack of rheumatism, neurasthenia. For the past three or four weeks she has only had at the most two hours of restless sleep each night.

March 18. One gm. trional at 8 o'clock. Slept well and quietly from 9 o'clock till 11, but not after that time.

March 19. One gm. trional at 8 o'clock. Slept lightly from half past 8 till midnight, and felt somewhat rested on waking. As the trional did not seem to give much result, its use was abandoned in this case.

Case XXI. Adelaide B., jeweler, 39 years old, chronic alcoholism in a neurasthenic subject. For a long time she has only slept three or four hours each night. Sometimes this sleep was continuous, and sometimes broken, but it was always restless and disturbed by nightmare. Has profuse perspiration. There is always a sensation of marked fatigue on waking.

March 5. Took one gm. trional. Three hours later slept for six hours. This sleep was sound without nightmare. On waking there was some nausea, and a little headache with some giddiness.

March 6. Took one gm. of trional. Went to sleep four hours afterward and slept for two hours only. There was nightmare and nausea, and headache on waking.

March 6 to March 11. No trional given. There was a complete absence of sleep.

March 11. The patient took one gm. of trional, and three hours afterward had only two and half hours' sleep, interrupted by nightmare. There was profuse perspiration, nausea and headache.

March 12. Took one gm. of trional. Two hours afterward fell asleep for two and a half hours only. The sleep was broken by nightmare. There was a little perspiration, but no headache or nausea on waking.

March 13. Took the same dose. Four hours afterward slept for five hours, but she was restless and woke frequently.

March 14. The same dose. Three hours of restless sleep.

March 15. Took one and one-half gm. of trional at half past 8 o'clock. One half hour later there was a sensation of torpor and weakness, and at half past 9 an irresistible desire to sleep. She slept lightly until 10 o'clock, hearing every sound; and the same light sleep interrupted by nightmare was renewed from 11 o'clock until 3 in the morning. On waking there was lassitude and heaviness of the head lasting all the day.

March 16. Took one and one-half gms. at half past 8 o'clock. Began to sleep one hour afterward woke at 11 o'clock and immediately went to sleep again, waking finally at 3 o'clock in the morning.

March 17. Took one and one-half gms. at 8 o'clock. Slept well from 11 o'clock till 1. And immediately after fell asleep again until 4 o'clock. In waking there was fatigue, nausea and headache, the latter symptom, which was not a constant one before the administration of the drug, became so since then.

March 18. Two gms. of trional at half past 7. From half past 8 till 11 there was pretty intense headache, great weakness and profuse sweating. At 11 o'clock the tendency to sleep was irresistible, and she slept from that time until half past three,

but very lightly, hearing all that was going on about her.

March 19. Two gms. at 7 o'clock. Slept from half past 8 till 3 o'clock in the morning. The sleep was light and restless; she woke two or three times, but went to sleep again immediately. On waking, was very tired, but had no headache.

March 20. Took two gms, and had a broken sleep, lasting from quarter past 8 till 4 o'clock in the morning.

March 21. The trional was stopped. During the next two nights the patient slept for a few hours, and afterward relapsed to her former condition of insomnia.

In the case of this patient a dose of one gm. trional produced a sleep of three to four hours; with one and one half gms, an average of five hours; and with two gms. about seven hours.

The size of the dose did not seem to influence the rapidity of the action.

Case XXII. N., 56 years old, neurasthenia. Very restless, sleeps about one hour each night. A dose of two gms. chloral hydrate produces about three hours' sleep.

May 17. Took one gm. trional at half past 7 o'clock. Had a good quiet sleep from 8 o'clock till half past 1. Was not restless during the remainder of the night. Awoke quite rested.

May 18. One gm. at 8 o'clock. Slept well without nightmare, from 9 o'clock till half past 4. At half past 1 o'clock arose to pass urine, but fell asleep again immediately. From May 18 till May 28, continued to take one gm. trional, and fell asleep on an average three-quarters of an hour after the administration, the effect lasting about seven hours. The sleep was quiet, and the patient awoke feeling rested, having only a slight dull feeling in the head, and a tendency to sleep during the day time. With the chloral the condition on waking was more disagreeable; the patient continued in a condition of drowsiness and felt less rested.

Case XXIII. L. P., 10 years old, shop girl, major hysteria, with attacks about every other day. Sleeps only about two hours each night, is restless and has frequent nightmares. In the day time she is very agitated and complains of violent palpitations. She has never taken any hypnotic.

June 19. On account of the extreme agitation of this patient, she was given two gms. trional at the outset—one gm. at 7 o'clock and another at 8 o'clock, in milk. She slept from 10.30 to 2 o'clock, then sat up on the edge of her bed and soon fell asleep again until 5.30, when she awoke quite rested, having only a slight dull sensation in the head. The sleep was very quiet for a period. The palpitations were less violent and there were no attacks of histeria during the day. On the following days she received two gms. each evening, with the result of obtaining on an average eight hours of sleep, calmer condition during the day, and some diminution in the frequency of the crises. Nevertheless, as the condition of excitability was still quite marked, and as she could not receive the necessary attention in a general hospital, she was transferred to St. Anne, on June 27.

(To Be Continued.)

POST-PARTUM HEMORRHAGE.

Flooding after the application of the forceps must always be expected, since the instrument is usually employed because of uterine inertia—a source of hemorrhage. The danger comes when the placenta is expelled. —Tarnier.

Painful fissures of the nipples have for some time past been treated by the application of cocaine, either in the form of an ointment or a liniment. It has been found, however, that when thus employed the secretion of milk is diminished and the erection of the nipple prevented. These objections have led Dr. Joire, of Lille, to use cocaine with the direct object of checking the secretion of milk when necessary. He recommends a solution of one grain of cocaine in ten grammes of water and ten grammes of glycerine, and he advises that this should be used as a lotion to the nipple five or six times a day. He explains the arrest of secretion by the anesthesia of the nipple which results.

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EDITORIAL PARTISANSHIP.

Under the title of "Medical Dogmatists" there appears in the Medical Times and Hospital Gazette an article by Dr. C. R. Illingsworth, of England, complaining of the treatment certain writers get in that country from the medical journals. While we cannot agree with the writer in all his opinions, nor do we believe that it is the general rule in America for our journals to favor prevailing fads in place of good, sound articles on old remedies, there may be some cause for a complaint of partisanship or favoritism, even in our country, where freeness of thought and equality of views are supposed to be supreme.

Dr. Illingsworth's views are expressed in his article somewhat as follows:

"Medical editors are quite as capable of working mischief in a spirit of dogmatism as our medical authors. Alertly scanning with critical eye the medical horizon, nothing that pertains to the science of medicine ever escapes them, except perhaps some exceptional instances of foreign origin.

"The tuberculin and antitoxin crazes were of German and French origin. One has utterly failed, and the other is failing; firstly, because the toxin and antitoxin are complete myths, on the confession of their originators; secondly, because the results are distinctly unfavorable; and thirdly, because the cultivation and injection of animal extracts is entirely repellant to the medical mind of the day, savoring too much of the loathsome prescriptions of medicine men in earlier centuries.

"Had there been some commercial value attachable in the editorial eye to toxin and antitoxin—which, of course, is most impossible and incongruous—certain editors and certain journals could not exert themselves more vigorously to obstruct all adverse criticism against antitoxins, and to push on all communications bearing favorably upon them than they do. When advocates of previous treatments have written and spoken in glowing terms of the value of certain old remedies rehabilitated and changed from the insoluble to the soluble form, and of the rapid cures effected in specific fevers, their stock phrase was, and still is, "Ah! A mild type."

"A medical man of repute, for instance, wrote recently to one of the journals protesting against attacking germ products rather than the germs themselves which produced the same. Supporters of that gentleman, writing to the journal, received but scant notice from the editor. Why should

this be? Has the editorial staff of that particular medical journal become so tyrannical because it has some ulterior commercial purpose and prospects at stake; or is it that it is going through the farce of posing as the goddess Justitia?

Complaints as to unfair treatment are replied to that the staff is bound to make "a selection" out of the communications. This is all very well; but not when it comes to rejecting four out of five, as fit denizens of the great w. p. basket.

"Be it a single editor or an editorial staff, a correspondent finds himself frequently most abominably treated. A friend of mine once sent a communication about a cure of intussusception by aerial inflation per rectum. The paper was accepted; and with the acceptance was sent a request as to how many reprints would be wanted. My friend said "none." The paper was suppressed at once and never appeared! Such conduct as this on the part of an editor surely deserves condemnation. Is public good to be arbitrarily sacrificed like this? Surely not.

"But when it comes to editorial staffs, the case is even more pronouncedly bad. I myself had the temerity to call upon a certain staff to put a question, and this was how that question was received and answered. "Why, may I ask, do you not notice that I have experimented under license with the poison of anthrax on mice, and so far from failing to save life, as has been the case with all continental experimenters, I have saved nearly half the animals experimented upon? Now, inasmuch as anthrax is the most virulent poison of a bacillary nature to be met with, and on the principle that if a drug will kill bacteria more quickly than any other, this treatment will necessarily be successful in all germ disorders, rabies and diphtheria included." "Oh!" said the chairman, "you want us to advertise you then, do you?" "No"—indignantly—"I do not! I want you to advertise or publish the truth, and if I, by your so doing, get any credit, that is no business of yours. I bid you good day."

This episode implies that any German or other foreigner may write as much stuff and nonsense as he pleases, and it will be inserted in the front pages of our journals.

MODERN SPECIALTIES AND THE GENERAL PRACTITIONER.

No one who calmly scans the field of medicine to-day, and beholds the growing tendency to specializing, can resist the impression that whether for better or worse, the secure ground-work of the general practitioner is being slowly but surely swept from under him. Even the most successful of those whose practice is made up of promiscuous cases will tell us that without obstetrics a respectable living is scarcely possible. This is especially the case in large villages and cities, where transportation is cheap and dispensaries loom up in every direction. The office cases, that class which in the near past provided a moderate income, without the hardship and exposure incident in visiting in inelement and severe weather, have quite vanished. Why, indeed, pay, and those ambulances cases pay nothing at all, when professors, assistants and skilled specialists, with medicine included, can be had for nothing; or, at the most, five or ten cents?

The village practitioner, innocently enough, perhaps, sends a case to a city dispensary, in order that a consultant's fee may be obviated, and the patient will be all the better enabled to generously meet his bill when called for. But the city philanthropist, on the pretext of haste or something else, slips his card to the caller, to meet him at his office. Assuming that even some one of our palatial medical resorts is entered where cooling draughts and free lunches are provided, with every courtesy bestowed on the "interesting case," the consequences to the plodding practitioner are worse; for this person returns to her rural house and spreads far and wide the report of the wonders wrought and cures effected, without a cent's expense."

This is no mere visionary speculation, but an indisputable fact; for we have been informed of a vast medical institution, not far from us, that has not only reduced the profession of the city in which it is located to straitened circumstances but has spread its blight to neighboring States.

Now, what is the remedy for this unfortunate state of affairs? Remove the cause, some will say; but this is easier said than done. The specialists are strongly entrenched, and in order to ply their craft, must have material wherever it comes from. They have their friends among the politicians, and have a way of securing State support in the name of charity.

We can see now but two ways by which the rising generation can preserve themselves from extinction, under the new order of things. One is a more compact organization, with the full power of discipline and enforcing penalties; and the other is for physicians to qualify themselves as specialists and keep their patronage in their own hands. This is not impracticable, and, no doubt, in the next century we will find few in the field of medicine who have not specially qualified themselves for some branch of the healing art.

BACTERIOLOGICAL DIAGNOSIS.

There seems to be some unreliability in the reports of bacteriological diagnosis in the New York City Health Department. A correspondent of the "Medical Record" gives the following as his experience with that Board:

I had occasion to report two cases of diphtheria, November 5, and was excessively annoyed to find cultures had been taken from the two patients on November 7. Both were typical cases that there could be no shadow of doubt regarding diagnosis.

Imagine my amazement at receiving a report, "Laboratory No. 7705," saying "the case did not admit of an exact bacteriological diagnosis, as the inoculation was made at so late a period of the disease." The case was about 48 hours old, and the pharynx is now (three days after taking culture) covered with exudate. The other report, "Laboratory No. 7729," said: "Bacilli present, slightly resembling diphtheria bacilli, not sufficiently characteristic for positive identification; a prompt confirmatory culture is requested." This could not be furnished, as the infant died from exhaustion before receipt of request. This case was not 24 hours old when culture was taken. Both cases were very severe in local and constitutional symptoms, and typical cases of diphtheria.

The question occurring to me, and which must suggest itself to all general practitioners, is this: If we cannot get a correct and definite report in a typical case, how can we rely on the report in a doubtful case? I have frequently had reports on cultures from the Health Department Laboratory where the clinical symptoms did not bear out the bacteriological report, but this is the first time it has been clearly demonstrated to me that the report is a lame reed to lean on, and for this reason I still further emphasize my objection to strange doctors taking cultures from every case as a routine procedure. I may say that in conversation I have heard several medical neighbors make the same complaint of interference and unreliability of report.

Book Reviews.

HOW TO DISINFECT. A guide of practical disinfection in every day life, and during cases of infectious illness. By C. T. Kingzett, F. I. C., F. C. S. Published by the American and Continental "Sanitas" Company, Limited., West 55th street, New York and London. Price 10 cents.

This work on disinfection is a good practical treatise on the subject and most intelligently handled. It treats of safe and efficient methods that do not rob the air of its essential oxygen or overpower noxious gases by worse odors of a disinfectant. The employment of sanitas preparations has long been known and tested. They are also, as we know, extremely effi-

cient against all forms of bacteria and micro organisms, yet not dangerous to life. They are powerful purifiers and non-corrosive. We advise all our readers to procure a copy of this work.

Surgery.

IN CHARGE OF
Dr. T. H. MANLEY, New York.

A NEW TREATMENT FOR SIMPLE OR COMPLICATED FRACTURES OF THE FINGERS AND TOES.

The Presse medicale for November 2 publishes a description of a new apparatus, which was invented by M. Schmidt, for the purpose of practicing extension, using the nail of the fractured finger as a means of support.

The apparatus itself is composed of a small board made more or less in the form of the palm of the hand or of the sole of the foot. Near the edge of the board, which should rest against the root of the digits, is an extension on which the factured finger or toe is placed. On the end of this extension is a hook. In applying this apparatus there must be ready for use a gimlet, strong silk or ordinary thread, a needle, and a rubber tube. The procedure is as follows: At some distance from the free edge of the nail two holes are bored with the gimlet at equal distances on each side of the median line of the thumb. Then with a needle the two ends of thread are passed through the holes (the needle must pass from the palmar surface to the dorsal surface of the nail), and after this is done the board, covered with a layer of cotton, is slipped under the hand and placed in such a manner that the healthy fingers may clasp the free edge, and the fractured finger is placed on the extension. The opposite edge of the board is then attached to the band by means of small bands of adhesive plaster passing around the wrist. A band of tarlatan wrapped around the board and the hand, but leaving the fingers free, holds the apparatus in place. On the hook at the end of the board the rubber tube is placed, the two ends of which are strongly tied, and, in drawing on the loop in the direction of the finger, the two ends of the thread, which pass through the holes in the nail, are attached to the rubber tube. At this moment the fracture is reduced and the fragments are held in place owing to the extension and to the counter-extension accomplished by the thread and the rubber tube. During the first three days the traction should not be strong, in order not to strain the nail too much; but from the fourth day traction should be increased by tightening the thread. The apparatus is left in place from two to three weeks.

According to M. Schmidt, his apparatus presents considerable advantages, such as free circulation in the fingers; the fragments do not rub against each other; and the seat of the fracture being exposed, the physician can easily watch the position of the fragments. Massage may easily be applied, also the necessary dressings in case of complicated fractures, etc. Furthermore, in cases of articular fracture the extension prevents ankylosis or articular rigidity.

In twenty-five cases in which this treatment has been employed, says the writer, onychia has never been observed. Sometimes a softening of the root of the nail supervenes, which disappears, however, as soon as the apparatus is removed. In two cases only this softening lasted until the nail fell out, pushed by the new one which had formed underneath it.—N. Y. Medical Journal.

A discussion on "General Constitutional Treatment in Diseases of the Ear" was opened by Dr. Gelle, Paris.

He pointed out that often the most important information the auris could give was that the ear was quite normal, and that the physician must look elsewhere for the cause of constitutional disturbances, though in many instances he could trace them to disease of that organ. Of the acute forms of aural disease, he referred first to those occurring in the course of the eruptive or other fevers, recommending careful nasopharyngeal treatment as the best means for

their prevention, and in particular Guye's method of nasal irrigation, the soda-water syphon douche, and, if necessary, the removal of tonsils. Deaf-mutism, he though, might be at times prevented by prophylactic specific treatment of the mother during gestation, and by attention to the auditory organs in the infant. He alluded to the influence of intestinal antise sis practiced by means of calomel, naphthol, salol and other means in preventing the multiplication of pathogenic microbes, and the occurrence of septic infection, and directed attention also to the hygiene of the mouth. In acute otitis in general he administered sulphate of quinine, but when it arose from influenza he preferred antipyrin, and in gouty otitis the well-tried anti-arthritic remedies. He had hopes of advantage accruing from the application of serum therapeutics in infective diseases of the organs of hearing. In chronic otorrhea he advocated more frequent recourse to antisyphilitic treatment, and attached great importance to general treatment in gouy, diabetic and tubercular subects, believing in a future for serum treatment in the last. The removal of causes of weakness, such as prolonged suckling, was of urgent importance. The early administration of pilocarpin in sudden deafness was strongly advocated. Hypnotism, though occasionally of value in slight cases of functional deafness, had never proved of value in severe ones, and electricity was of value in a small sphere.

There was no further discussion on Dr. Gelle's exhaustive paper.

Dr. Yersand Arslan, Padua. On adenoid vegetations.

Dr. Arslan attached great importance to the diagnostic value of posterior rhinoscopy. In operating he employed the curette and the finger-nail, and invariably during anesthesia by bromide of ethyl.

The discussion was continued by Drs. Corradi, Goris, Gradenigo, Pritchard, Baber and others.

Dr. Helme protested against the employment of the finger-nail as liable to convey septic organisms.

Dr. Moure held that the finger could be sterilized for this operation as well as for any other serious surgical proceeding such as a laparotomy.

Dr. Dundas Grant operated under nitrous oxide on account of its safety, and in order to attain the necessary degree of rapidity he was accustomed to commence by scraping with his finger-nail, sterilized by means of lysal and then alcohol, so as to judge at the same time of the extent, nature and situation of the growths, and select the instrument suitable for concluding the operation, Gottstein's or Delstanche's curette when the back of the pharynx was the site of the growths, and Schech's or Quinlan's forceps in case of the vault being mainly involved.—The Journal of Laryngology, Nov., '95.

INTRODUCTION TO THE DISCUSSION ON THE TREATMENT OF INTRA-CRANIAL ABSCESSES FOLLOWING PURULENT DISEASE OF THE MIDDLE EAR.

By Dr. Thomas Barr, Glasgow.

We are able to reach and deal successfully with the following conditions:

1. Abscess in the cerebrum, especially in the temporo-sphenoidal lobe.
2. Abscess in the cerebellum.
3. Purulent formations at the base of the skull, either (a) between the bone and the dura mater (the so-called extra-dural abscess), or (b) between the dura mater and the surface of the brain (the sub-dural abscess).
4. Infective thrombosis of the sigmoid sinus even when secondary foci may exist elsewhere.

Preliminary opening of the middle ear. In many of these conditions we are able to reach the abscess most conveniently from the cavities of the middle ear; in others we can deal with it more satisfactorily through a trephine opening in the lateral wall of the skull, above or behind the middle ear.

In all of these conditions it is essential, as a preliminary operation, to explore the cavities of the middle ear by removing the outer wall of the antrum. With the cavities of the middle ear thus opened, we ought to scrutinize with a good light and a reflect-

ing mirror the bony partition which separates the tympanum and antrum at their roof from the dura mater, as well as (and this is perhaps more important still) the bony partition of the sigmoid groove. The existence of a carious aperture of an exposed dura mater or sigmoid sinus or of granulation tissue sprouting from these, will regulate our further procedure. The partitions of the roof and sigmoid groove, separating the middle ear from the temporo-sphenoidal lobe above, and from the sigmoid sinus behind, are without doubt the two great pathways by which the infective matter effects its fatal entrance to the interior of the cranium. Fortunately, they are both accessible, and readily accessible, from the middle ear spaces, and by the preliminary and essential operation of opening these spaces we are able to remove the pus, the cholesteatomatous matter, the granulation tissue, the carionecrotic debris, and the pathogenic organisms from the antrum and attic, these primary and dangerous formations (the "dynamite" of Prof. Macewan) which bring the patient's life into peril.

Extra-dural abscess. Having broken down the cranial partitions, we shall find, in a certain proportion of cases, pus between the dura mater and bone, the extra-dural abscess, in one or other of the vulnerable situations. Above the tegmen antri, or tegmen tympani, pus is often found extradurally, the removal of which, without going deeper, brings about the disappearance of grave symptoms. Such extra-dural formations may be the precursors of temporo-sphenoidal abscess, just as similar formations at the sigmoid groove often lead to septic thrombosis of the lateral sinus, general septicemia, or cerebellar abscess. Operations for the removal of extra-dural abscess have been singularly successful, and during the last seven years thirty-nine cases have been reported of extra-dural abscess, either at the tegmen or at the sigmoid groove, operated upon and followed by recovery.

Septic thrombosis of sigmoid sinus. Extra-dural abscess in the situation of the sigmoid groove is generally associated with septic thrombosis in the sigmoid sinus—hence in all such cases the sinus should be carefully examined. If it is found to be occupied, as it generally will, be by a thrombus, and if symptoms exist pointing to disintegration of the clot and general septic infection, the blood current, if still flowing through the sinus, should be stopped in order to prevent further systemic infection. This is achieved either by ligature of the jugular vein in the neck, as first proposed by Victor Horsley, or, as advocated by Macewan, slitting up the freely exposed sinus, removing the septic thrombus, stuffing with iodoform gauze, and by pressure bringing the outer wall of the sinus into contact with the inner, thus obliterating the venous tube. If there is reason to believe that the sinus is quite occluded, and the circulation entirely checked, the simple application of antiseptics and pressure may suffice. In the hands of Victor Horsley, Arbuthnot, Lane, Ballance and others, the operation of ligaturing the jugular vein in two places and cutting between has proved very satisfactory, and there are now thirty-six recorded cases of successful operations, where septic thrombosis and general infection existed.—Journal of Laryngology, Nov. 1, 1895.

Medicine.

IN CHARGE OF

Dr. E. W. BING, Chester, Pa.

ARSENIC.

"Arsenic, Its Influence on Nutrition," is the title of a thesis by Voratello. It is an experimental study of the action of the drug as a tonic and constructive agent.

Arsenic, in doses of 12 to 14 mg. per day, aids elimination of uric, phosphoric acid and chloride of sodium. These doses showed also an increase in general nutrition; with larger doses there was a lessening in the nutritive processes, followed by emaciation. Levy reached similar conclusions. He used the drug in some stomach affections—he found that it

removed pain, increased the appetite and digestion. For arsenic to be well borne, it should be administered about one-half hour after meals, as then the production of hydrochloric acid is occurring in the stomach. He concludes that arsenic acts as a stimulant to general nutrition, increasing bodily weight, strength and endurance.—France Med.

PULMONARY EMBOLUS WITH RARE COMPLICATIONS.

Fernet communicates an observation of a person 20 years of age suffering from cardiac disease and albuminuria, in whom a pulmonary embolus was followed by numerous and rare complications, to wit: A pleural effusion on right side, sero-sanguinous—amicrobic; twelve days later pneumothorax on the same; as a consequence of the pneumothorax a double purulent pleurisy, the pus of which contained many pneumococci and some streptococci. All these lesions were verified at the autopsy. Gailard remarked that it is excessively rare to see a pulmonary embolus determine a pneumothorax as a consequence.—La France Med.

The treatment of ulcerations or granular sores by lactic acid, pure or in various dilutions, has been found very successful.—Lecocq.

ICHTHYOL IN ERYSIPELAS.

"Ichthyol in Erysipelas" is the subject of an article by Vychsoisky, in the Bull. de Therap. and Med. Generale. He used it in cases of the disease on the face and scalp, and cured all his cases (12). He employed an ointment, applying it to the skin twice a day, in a thick layer. The proportion was one part ichthyol to eight parts of any simple ointment. If this did not lower the temperature rapidly, he increased the strength. The addition of camphor seemed to increased the action and cover the odor.

RIGHT-SIDED EDEMA IN HEPATIC DISEASE.

Hano reports two cases of this affection—one in a case of hypertrophic cirrhosis and one in a case of cancer. It was thought at first due to the decubitus, which was for a long time on the right, but having observed two fresh cases he found that this was not the cause, but thinks there is a connection between the edema and the liver disease.—La France Med.

THE ACIDS AS STIMULANTS TO THE PANCREATIC SECRETION.

The researches of Dolnisky, based on those of Becker, which show that the ingestion of a solution of carbonic acid has a stimulating effect on the pancreas, provoking an abundant flow of the secretion. The experiments were carried out on dogs, in whom a pancreatic fistula had been created. The animals were fed on bread and milk. When the flow of the secretion became nearly constant, 250 cc. of acid solution, mixed with the food or drink and heated to 17 or 18 degrees C., were injected.

Hydrochloric acid was tried first. This produced an extremely abundant flow. A solution ten times weaker than the normal acid of the stomach was sufficient. Phosphoric, acetic, lactic acids all produce the same effects, but in a less degree. Alkaline substances or solutions produce no increase in the flow.—Courrier Med.

DYSPHAGIA IN TYPHOID FEVER.

According to this writer, dysphagia is a frequent accident in the course of typhoid fever, but more so in some epidemics than in others. Louis noted some cases. The disorder may be seen in three varieties—the first comprising cases mechanically produced by the condition of the tongue, pharynx, etc. The second takes in those cases in which it is due to a reflex action; due to some lesion of the parts, varying from conjestion to ulceration, abscess or gangrene The third variety results from disorder of the nervous system, which

may arise from lesions of the upper part of the spinal cord, generally coming on late in the disease, and usually fatal; or again, it may result from purely spasmodic conditions allied to hysteria, the character of which it is somewhat difficult to distinguish from the more serious form. The period in the disease in which it occurs, absence of bulbar phenomena (particularly relative to the respiration circulation, etc.), are the distinguishing features. In some exceptional cases dysphagia has been the forerunner of grave nervous disorders.

Treatment has not given satisfactory results.—Courier Med.

BACTERIOLOGY OF PHLEBITIS DURING TYPHOID FEVER.

Vincent, of Algiers, observed 28 cases of phlebitis in 340 cases of typhoid; that is a proportion of 8.23 per cent. In each case there was demonstrated in the thrombotic vessels, and clots, the existence of the white and yellow staphylococcus. The author produced experimental phlebitis in an inoculated rabbit whose femoral vein had been artificially contused. These microbes have also been found during the febrile period at the beginning of the disease, in the blood. The staphylococcus appears to be the principal agent in this complication of typhoid fever, as it has been found alone in cases of this disease. Contrarily to what is observed in other diseases, such as tuberculosis, puerperal fever, etc., typhoid phlebitis is not a manifestation of the specific germ—it is caused by a superadded germ. In all Vincent's observations this germ was the staphylococcus pyogenes (aurus).—Courier Medical.

THE LINGUAL TRACTION METHOD OF ARTIFICIAL RESPIRATION.

(Therapeutical Gazette, August 15, 1895.) By A. E. Russel, M. D.

This author has used successfully the Laborde treatment for resuscitation of the new-born in two cases where the ordinary methods of artificial respiration were without the slightest apparent effect. After the fifth or sixth traction emesis was provoked and followed by shallow respiration.

The mechanism of this operation the stimulation produced by the traction of the tongue on the sensory nerves and the reflex action on the principal motor nerves distributed to the muscles of respiration. The return of the contractions of the diaphragm is the first result produced by these lingual tractions, feeble movements at first in the epigastric region, afterwards extending upward to the thoracic region, and, last of all, the action of the muscles of the face, nose, etc.

Over fifty cases in which this method has been used for the treatment of asphyxia in the new-born have been reported from different parts of Europe. The president (M. Rochard) of the Academy of Medicine of Paris, in his report of work done in the year 1894, says, "He (Dr. Laborde) has received from all parts evidence which confirms his statements, and this year he has had the extreme satisfaction to note that colleagues up to the present time incredulous or indifferent publicly admit before the society the excellence of this method after having seen it succeed in almost desperate cases. This justice has been rendered him by Drs. Lancereaux, Verneuil, Labbe and Perier. At the present time the lingual traction method may be considered as classic in all the cases of apparent death."

BLEEDING HEMORRHOIDS.

Order complete rest in horizontal position; bathe region with cold boracic lotion. If pain is acute, apply an ointment of vaseline in each ounce of which are two grains of muriate cocaine, five grains extract belladonna, and seven and a half grains extract krameria. If hemorrhage is severe, apply a solution of iron perchloride on cotton wool. Reduce hemorrhoids with sponge soaked in cold water. In the evening introduce a suppository containing one-fifth grain of extract belladonna, one-half grain of extract opium, fifteen

grains of extract krameria, and sixty grains of cacao butter. If hemorrhoids continue to cause annoyance, surgical interference either by forced dilatation of the sphincter or by extirpation will be necessary.—Practitioner (London).

TRANSLATIONS FROM

Foreign Exchanges.

BY DRS. CHANDLER AND DAVIDOW.

SPLENECTOMY FOR ECHINOCOCCUS CYST OF THE SPLEEN.

By E. Hahn.

From the City General Hospital at Friedrichshain in Berlin—Deutsche Med. Wochenschrift, 1895. No. 28.

H. describes a case which occurred in a woman 35 years old. At the time of entrance to the hospital an easily movable tumor the size of a child's head, and with a smooth surface, had developed in the left side of her abdomen. The descending colon on inflation seemed to cover the tumor.

The operation was done through a median incision, extending half way above and below the umbilicus. When the tumor was brought out through the incision, it proved to be a degenerated cystic spleen. The pedicle was tied in several places with fine silk, cut off and then dropped back into the abdominal cavity. Interrupted catgut suture of the peritoneum; muscular layer and skin sutured with interrupted silk. The weight of the tumor was 850 gms.

Examination of blood at time of operation gave a proportion of white to red corpuscles of 1:160. This condition improved rapidly, however. Recovery, excepting interruption by an attack of pleurisy, was normal.

H. quotes the different statistics, which gave a mortality of 27 per cent., according to Tinkler, for operation in echinococcus cyst of the spleen, since the days of antisepsis.

So far as splenectomy is concerned, there were four cases operated upon for blood cysts, and all recovered; of the seven extirpations of the spleen for echinococcus cysts, two were unsuccessful. Death occurred in the cases of Koberle and Durante; the successful cases were those of Bergman, Maas, Novano, Snegirjeff, Hahn.

The unsuccessful cases were noteworthy for the very extensive adhesions between the stomach, intestines and diaphragm.

H. proposes in such cases to sew the cyst wall to the abdominal wall and open the cyst then or at a later operation; he is not in favor of puncture with or without aspirating, and the injection of a fluid into the sack, neither does he advocate the attempt to remove the cyst and leave behind the spleen.

H. chose splenectomy in his case in preference to a primary or secondary incision, which offers still better results (only two deaths in 15 cases); because the cyst wall was very thin and was situated on the concave side of the spleen, and for the additional reason that a twist could easily occur on account of the length of the pedicle.

W. F. G.

TWO CASES OF LATE SUTURE OF THE RADIAL NERVE AFTER STRETCHING OF THE SAME.

By F. Herzog.

Wiener Med. Wochenschrift, 1895. No. 4.

In both cases there were injuries in the upper arm caused by sabre cuts in officers' duels, by which injuries the soft parts on the flexeor side were cut down to the bone. Typical radial paralysis and absolute uselessness of the arm followed the injury. Examination of the severed nerve 2-3 months after the injury showed a separation of 2.2 1-2 cm. After freeing and stretching the proximal end of the radial nerve, the proximal and distal ends of the severed nerve were refreshed and reunited. Primary union. Early electrical treatment, local baths and massage restored, after some months, the usefulness of the arm.

W. F. G.

TREATMENT OF PERFORATION OF GASTRIC ULCER INTO THE ABDOMINAL CAVITY.

By Pariser.

Deutsche Med. Wochenschrift, 1895. Nos. 28, 29.

Pariser, in order to decide the question whether, after establishing the diagnosis of a gastric tumor perforating into the abdominal cavity, one should treat it expectively, or by a laparotomy with the closure of the hole in the stomach, collected some statistics of the cases, which had been previously published, and of some later ones which has not been published.

He obtained a much better result than that found in the older statistics, so that out of 43 operated cases, 10 recovered; under expectant and purely internal treatment death was almost sure to follow. Data of time of operative interference existed in eight out of eleven cases, and showed that the operation was performed between 3-16 hours after perforation. The earlier the operation, the better the prognosis, although death occurred in some of the early operations.

The position of the tumor and size of the perforation influenced the prognosis. It sometimes happened that a second perforation was overlooked at the time of the operation.

Among 30 cases the tumor was situated twice on the small curvature, six times on the posterior wall, and 22 times on the anterior wall. Much more frequent at cardiac than at pyloric. Out of 29 cases 25 were women, 4 men.

The expectant treatment of perforation into the abdominal cavity has been successful only in those cases where the stomach was completely empty. Pariser mentions the case of a woman 31 years old, where this condition was present at the time of the perforation. She recovered without operation, in spite of very threatening symptoms, by complete abstinence of food by the mouth.

It is only when one is sure that the stomach is empty and can be kept so that one can refrain from operating. Otherwise operate in every case.

W. F. G.

ON THE THEORY OF CONGENITAL DISLOCATION OF THE PATELLA.

By K. Appel.

From the Surgical Clinic of the University at Halle.—Munchener Med. Wochenschrift, 1895. No. 25.

Two cases of congenital dislocation of the patella, which came under observation at the Halle clinic (one of which was a man 26 years old, and the other a woman of 40 years) showed such a deformity of the external condyle of the femur and the corresponding half of the trochlea, that while the external border of the trochlea had its normal contour, the condyle, as a whole, seemed flattened and roof shaped on its outer surface. As a result, that portion of the trochlea belonging to the external condyle was diminished in size, and the trochlea itself was partially leveled off in its upper part.

In the literature on the subject of congenital dislocation of the patella Appel found 13 cases with this deformity of the condyle mentioned more or less distinctly. In only three cases was the external condyle found normal, and in the other cases no mention was made of the anatomical relation.

Even if Appel grants that the dislocation might occur through an intra-uterine injury to the inner border of the patella, still the above-mentioned discoveries would lead him to the hypothesis that in the majority of cases the cause of its origin is in the changes of the external condyle of the femur, a result due to a congenital defect in development or to rachitis.

With such a deformity, a slight blow is sufficient to lead to a dislocation, such as occurred in the case of Appel's patient.

W. F. G.

Miscellany.

MY STARS.

O Star of Faith, desert me not;
At times when heaven may seem to fail,
And earthly lights before me pale,
Then steadfast shine upon my lot.

O Star of Hope, that most in days
Of childhood shinest clear and bright,
Shed on me still thy cheerful light,
Illume my pathway with thy rays.

And last, not least, O Star of Love,
Cheer and sustain my lonely heart,
Make sweet for me life's bitter part
And lift my soul, its ills above.

Ye triple stars, Faith, Hope and Love,
That on me shine from realms more bright,
Ye are but almoners of light
Effulgent from the God above.

Faith, Hope and Love in triune bond
Shine on, shine on within my soul;
Shut out the darksome world's control
And lead to perfect light beyond.

—Thomas Wistar, M. D.

Dr. H. W. Cox, the well-known neuralogist, from Portland, Ore., has lately make quite an extended visit to New York, in pursuit of fresh knowledge in his chosen specialty. The doctor has been the guest of several of the most distinguished neuralogists and practitioners while in the city, and returned recently to his home on the Pacific coast with the best wishes of a host of friends that he leaves behind him in the East.

PURULENT OPHTHALMIA.

R.—Hydrastis sulphatis,
Acidi borici,
Sodii biboratis.....of each 5 gr.
Tr. opii deodor.....½ dr.
Aquæ dest .....1 oz.
To be used as a collyrium from the beginning.—Scott.

LESIONS THAT MAY SIMULATE CHANCRE.

A. Artificial indurations caused by irritants applied to simple lesions. B. Nodular lymphangites, as occur in gonorrhea. C. Scabies, where penile lesions are the rule. D. Secondary indurations at the site of the initial lesion (Fournier's pseudo-chancre). E. Secondary syphilitic papules or tubercles situated upon the genitals. F. Ulcerative gummata of the genitals. G. Epitheliomata of the genitals.—N. Y. Med. Record.

GONORRHEA.

R.—Perchloride of mercury....1 part
Antipyrin .....100 parts
Distilled water .....10,000 parts

The injection should be used four times a day and retained as long as possible. The addition of antipyrin prevents smarting.—Vatier.

CHORDEE.

R.—Ex. opii. .....1 gr.
Camphoræ .....10 gr.
Ol. theobrom.....q. s.
M. et ft.—Suppository No. 1.
Sig.—Use at bedtime.
—Ricord.

GONORRHEA, SECOND STAGE.

R.—Hydrarg. chlor. corros....1-6 gr.
Acidi carbolici. .....1½ dr.
Zinci sulpho-carbolate ....24 gr.
Boro-glyceride (50 per cent.sol).2 oz.
Aqua rosa.....q. s. a. d. 8 oz.
M. Sig.—Use as injection after urinating.—White.

INCONTINENCE OF URINE.

R—Tincturæ belladonnæ,
Tincturæ cubebæ .....each 2 fl. dr.
Tincturæ nucis vomicæ,
Tincturæ rhei aromaticæ...ea. 1 fl. dr.
Tincturæ cascarillæ .....2 fl. dr.
Twelve drops at bedtime for a child from 7 to 10 years.

CONJUNCTIVITIS.

R—Acidi borici .....20 gr.
Sodii chloridi .....8 gr.
Aquæ destillat .....2 fl. oz.
M Sig.—Use freely as a lotion every four hours, first warming.

HERPES ZOSTER.

R—Boric acid .....1 gr.
Glycerine, q. s., vaseline.....30 gr.
Cocaine hydrochlorate
Extract of opium.....each 30 ctgr.
M—The neuralgia following the eruption is best treated by Fowler's solution.
—KAPOSI, Med. Record.

CONSTIPATION OF INFANTS.

R—Sodii bicarb .....1 dr.
Tr. nucis vomica.....6 drops.
Tr. card comp.....2 fl dr.
Syr. simp.....2 fl dr.
Aq. chloroform.....½ fl oz.
Aquæ .....2 fl oz.
M. Sig—Teaspoonful every six hours.—E. Smith.

The Times and Register.

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Original.

CLINICAL REPORTS ON TRIONAL.

BY DR. F. A. A. BOUDEAU, OF PARIS.

(Continued from last number.)

6. INSOMNIA DUE TO VARIOUS CHRONIC AFFECTIONS.

Case XXIV. Eugene B., cook, 37 years old. Had undergone a laparotomy thirteen days before, for a fibroma, which the surgeons were not able to remove, and which has been the cause of a very profound anemia, from repeated metrorrhagias. For a month she has not had any continuous sleep. She falls into a doze from time to time, and then after a short nap will lie awake for an hour or more. No restlessness.

March 16. Took one gm. trional at 6 o'clock. Slept from 8 till 9 o'clock, and again from 10 to 12, and then immediately fell asleep again till 4 o'clock. But the sleep was very light, the patient hearing everything which took place about her. No nightmare. Nevertheless she felt on waking more refreshed than usual.

March 17. One gm. of trional at 6.30 o'clock. The same light sleep as before, from 8.30 till 11 o'clock, and again after an interval of a few minutes until 4.

March 18. One gm. of trional at 7 o'clock. Slept from 9 o'clock till 10.30, and again, after a brief interval, until 2 o'clock, but the sleep was very light, interrupted by frequent waking, and was followed by a sensation of fatigue.

March 19. Took one gm. trional at 7.30 o'clock. Slept from 9 o'clock till midnight, very quietly; and again from 12.30 until 4 o'clock, but during this latter period was very restless. Felt somewhat refreshed on waking.

March 20. The trional was stopped. Sleep continued to be broken in character. Never any unpleasant symptoms. The average amount of sleep obtained was about six hours, but it was light and very broken.

Case XXV. Catherine A., 42 years old, cyst of the ovary. For a long time the patient had not slept more than two hours each night.

April 23. Took one gm. of trional at 6.30 o'clock in the evening. Slept from 7 until 5 o'clock in the morning, quietly and without any interruptions. Awoke feeling comfortable and refreshed.

April 24. One gm. trional at 8.15 o'clock. Slept from 9.30 o'clock till midnight. Fell asleep again, waking for a few minutes, towards 3 o'clock, after which she slept continuously until 6 o'clock, well rested. The use of trional was continued for eight days longer at the same dose period. The average result was eight hours of quiet sleep. After the drug was stopped the patient slept a little longer than she had previously.

Case XXVI. Amelia A., 18 years old, florist, chlorosis with phlegmasia alba dolens of the right leg. Has slept about half an hour each night for about a month, and is very restless during the rest of the night. At the first trial, with one gm. trional, she slept eight hours the first night and two hours on the succeeding ones. At the second trial, March 13, she took one gm. of trional at 7 o'clock in the evening. Beginning five hours later she had six hours of

continuous sleep, without nightmare and was much refreshed on waking.

March 14. One gm. of trional at 7 o'clock. Fall asleep two hours later for five hours.

March 14 to March 17, an average sleep of five hours.

March 17. One gm. of trional at 6 o'clock. Two hours later she slept for three hours, the sleep being restless. There was drowsiness and hebitude on waking, which passed off during the day.

March 18. At the patients' request, the trional was replaced by the same dose of sulfonal, taken at 6.30 o'clock. She slept from 9 o'clock till 1.30, and again from 3 o'clock till 6, the sleep being quiet, refreshing and not followed by heaviness in the head. The same results were obtained on March 19, and subsequent days. The average sleep being about nine hours, and coming on two and one-half to three hours after the administration of the drug period. Sulfonal, in this case, proved to be superior to trional, which only gave an average of five hours' sleep. There was not much difference in the rapidity of the action, sleep coming on two hours after the trional, and two and one-half hours after the sulfonal.

Case XXVII. Alphonsine A., housewife, 61 years old, cancer of the stomach. Can hardly be said to sleep at all during the night. From time to time has a nap of a few minutes.

March 18. One gm. of trional at 7 o'clock. Slept from 7.30 till 10 o'clock, and again from 11 o'clock till 3, the sleep being sound, without nightmare.

March 19. One gm. of trional at 7 o'clock. Slept from 7.30 till 10.30, and again from 11 to 5 o'clock, waking, however, several times. On waking the patient was much refreshed, felt better and was more hungry than she had been for a long time. During the night she perspired profusely, which had not occurred previously.

On six other days the same results were observed, the mean duration of sleep being seven hours. No unpleasant symptoms, except the unaccustomed perspirations. The trional seemed to have a good effect upon the appetite.

7. INSOMNIA IN DYSPEPTIC PATIENTS.

Case XXVIII. Louise L., housewife, 34 years old, dilatation of the stomach. For the past six weeks has only had one or two hours' sleep each night, and this has been broken by nightmare. From April 6, till April 11 took one gramme trional each evening at seven o'clock. Falls asleep towards nine o'clock, on an average, and sleeps till midnight. Does not rest well, and has more severe headache than before the administration of the trional. Has profuse night sweats, which were not present previosly. No influence on the gastric condition.

Case XXIX. N., thirty-five years old, dilatation of the stomach. Has only two or three hours of heavy sleep, interrupted by nightmare. May 20 took one gramme of trional at half past seven. From eight o'clock till five, had a sound and quiet sleep, without nightmare, and awoke feeling very much refreshed. May 21, took one gramme of trional at eight o'clock, and slept very well from half past eight till half past four o'clock. May 22, took no trional and did not sleep. From May 22 to May 28, took one gramme of trional each evening, and, after an average interval of half an hour, sleep came on, lasting six or seven hours. No bad symptoms.

8. INSOMNIA IN A MORPHINE HABITUE.

Case XXX. Renee L., 22 years old, morphine habitue. Has been in the habit of taking daily twelve Pravaz syringefuls of 1-40 solution of morphine. The patient is extremely emaciated, vomits frequently, has palpitation and profuse sweating. Menses are regular, but very scanty. She came to the hospital on March 8, having already taken eight syringefuls during the day. She was given two more during the evening of a solution of 1-50.

March 9, she received injections of four syringefuls of 1-50, with one gramme of trional after the evening hypodermic. One hour later had a

sleep lasting six hours. Pulse, 80.

March 10, four syringefuls of 1-50 and one gramme of trional. After two hours slept well for six hours, without nightmare. Pulse, 76.

March 11. Three syringefuls of 1-50 and one 1-100, with one gram of trional. After an interval of five hours, had a quiet sleep lasting six hours. Pulse, 82.

March 12. The same dosage. Nine hours of calm and refreshing sleep coming on one hour after.

March 13. Three syringefuls of morphine, 1-50, and one gramme of trional. One hour later slept for eight hours.

March 14. The same dosage. Two hours later slept for nine hours.

March 15. The patient asked for an increase in the quantity of trional to make up for the diminution of the morphine. The dose was raised to one and one-half grammes. She was more restless than on the previous nights.

March 16. The same dose of trional was increased to two grammes, and one of the hypodermic injections was made, with a solution of only 1-100. One hour later the patient had a very good sleep, lasting about ten hours. No discomfort on waking.

March 17. The same doses were given with the same result.

March 18. Two and one-half syringefuls of 1-100 solution of morphine and two grammes of trional at half past eight o'clock. Slept from nine o'clock until six in the morning, but woke frequently.

From March 19 to March 23, patient menstruated normally, except that the flow was not very abundant. The medication was continued as before, with an average result of seven hours' sleep, coming on one and one-quarter hours after taking the drug.

March 24. The injections were reduced to only two of morphine, 1-100, with two grammes of trional at eight o'clock; slept quietly from nine o'clock until six.

March 25 and 26. The same result obtained.

March 27. The dose of trional was raised to two and one-half grammes.

From March 27 until April 20, when the patient voluntarily left the hospital, the same medication was continued, resulting in an average sleep of nine hours, coming on from one to one and one-half hours after taking the dose.

The urine was examined every day with reference to albumen, glucose and hematoporphyrine. Nothing abnormal was found at any time.

According to our observation, trional did not seem to check perspiration. No disturbance of any of the bodily functions was noted at any time during the treatment.

In all of these cases the urine was examined at frequent intervals and neither sugar nor albumen was found at any time, nor have they ever shown the dull red tinge which indicates the presence of hematoporphyrine.

The average amount of sleep obtained has been about seven hours, and it has followed after an interval of three-quarters of an hour to one hour after the administration of the drug, given in wafers and followed by a hot draught. The time required for the drug to act has, however, varied between the extremes of fifteen minutes and six hours. The patient is easily aroused from the sleep, but it is resumed immediately.

In some of the cases (Nos. 2, 4, 11, 12), trional has seemed to cause nightmare. Gaillard has also reported a case in which the patient refused to take it, on account of the frightful nightmare which it caused her. We observed one case of failure in a case of cardiac disease, with defective compensation (No. 6.), in which the insomnia yielded to morphine. In our two hysterical cases (Nos. 19 and 22), it had a quite marked sedative action. In four cases (Nos. 4, 7, 11, 21) there were some transitory disturbances on waking; nausea, headache, vertigo, uncertainty of gait and noises in the ears. In case 21, the headache was, however, persistent.

In case 15, trional was shown to be superior to chloral, sulfonal and opium; but in case 25, on the contrary, it was inferior to sulfonal given in the same dose. In two cases (Nos. 27 and 28), there was noted sweat-

ing, which had not been present previously, and for which there was no other explanation. In the first of these cases last mentioned, a very decided improvement occurred in the appetite.

In nearly all the cases, the temperature was taken in the evening, before the medicine was taken, and on waking in the morning. There was no difference that could be attributed to the drug. The pulse was taken every morning and showed no changes after trional. Neither have we observed any action upon the respiratory apparatus. A case of favorable influence upon the digestive organs was mentioned above, in addition to which we find note of a little diarrhea in case 3.

INDICATIONS FOR THE USE OF TRIONAL.

Trional is indicated in insomnias of every variety. It succeeds particularly well in those which are purely nervous, with little excitement; on the other hand, it is less efficacious when the sleeplessness is caused by a violent cough, as in a case of tuberculosis example. Its action is much more reliable in melancholia than in conditions of well-marked excitement. In delirium tremens it has seemed to give good results, although this opinion is not shared by all the authors. In morphinomania very good results have been obtained by it. In general paresis the results are less favorable. Speaking broadly, it may be said that trional is better suited to the cases of those who go to sleep with difficulty, than it is to those who find no trouble in getting to sleep, but who wake too easily. (Vogt.)

In surgical practice it is indicated in the insomnia of exhaustion from chronic surgical ailments, because it does not depress the heart action like chloral, or in the wakefulness, not associated with much pain, which is met with after operations. (Van Schaick.) However, we believe that pain is not a contra-indication for the use of trional, which often relieves, not the pain itself, but the condition of nervous hyper-excitation resulting from it.

It gives good results in the night terrors of childhood.

DOSAGE.

Trional may be administered in single or in divided doses:

1. In single doses—small doses, below one gramme usually give no result. Moderate doses, from one to two grammes, act chiefly as hypnotics in all cases of insomnia without too much excitement; but their sedative effect is not marked.

The method of Pelanda and Cainer seems very advisable. They recommend giving a dose of one and one-half to two grammes at the start, and then reducing the dose to one gramme on the following days, in order to keep up the hypnotic effect without any cumulative action. Large doses, from two to four grammes, should be reserved for conditions of violent excitement; their sedative action is especially pronounced.

2. In Divided Doses.—By giving wafers containing 50 centigrammes, two or three times per day, a pretty marked sedative effect is obtained, with relatively small doses, but without hypnotic action.

It is especially in such cases, and when trional is given for a long time continuously, that its use should be suspended at frequent intervals, and the freedom of the bowels assured, if necessary, by purgatives. As in the cases in which haematoporphyrinuria has appeared, the urine has always been found strongly acid, Professor Muller, of Gratz, advises that this symptom be met by the use of large doses of bicarbonate of soda. As a preventive measure, the alkaline mineral waters should be given along with the trional.

The dose of trional for women should be, on an average, 50 centigrammes less than that for a man, as it has been noticed that accidents are more common in their case.

The following, according to Claus, are the doses for children:

From one month to one year, 2 to 4 centigrammes.

From 1 year to 2 years, 4 to 8 centigrammes.

From 2 years to 6 years, 8 centigrammes to 1.2 grammes.

From 6 years to 10 years, 1.2 to 1.5 grammes.

When the insomnia is associated with pain, it is desirable to combine the trional with one centigramme of morphia, or two or three centigrammes of codeia, or perhaps, with phenacetine or acetanilide. Good results may thus be obtained which could not be secured by either drug alone.

METHODS OF ADMINISTRATION.

Trional may be given:

1. Suspended in cold milk, tea or mucilage.

2. In a hot liquid, such as milk, wine or punch, in which it is partly dissolved and partly held in suspension.

3. When the patients refuse liquids out of suspicious motives it may be mixed with finely divided food or with broth. In cases of children, it may be given in honey or sweetmeats.

4. By enema, the effect follows as promptly as when given by mouth.

But the best way is to give it in unleavened bread, followed immediately by a drink of 200 cc. of some hot liquid. This should be given about a quarter of an hour before bed time.

CONCLUSIONS.

1. Trional is a good hypnotic in mental disorders, as well as in the insomnias of miscellaneous origin. Its effect is produced in from three-quarters of an hour to one hour, and the average amount of sleep is about seven hours. The patient sleeps quietly, is easily aroused and falls asleep again promptly.

2. It seems to act upon the cerebral cortex, perhaps by inducing a condition of ischaemia.

3. It succeeds most uniformly in the insomnia attended by pain. When the pain is too severe, the addition of morphine or phenacetine will secure a good result.

4. It will be found to be less efficacious when there is condition of violent excitement, or when there is severe cough.

5. Compared with sulfonal and chloral, it seems to equal the former in effect and to be inferior to the latter; but it excels sulfonal in rapidity of action (it acts in from three-quarters to one hour), and has an advantage over chloral in that it does not set up a drug habit and that it is not depressing when given with any degree of caution.

6. It will, therefore, be particularly useful in those patients in whom chloral has lost its effect from long habituation, and in patients whose condition is already one of marked depression.

7. Small doses (1-2 grammes) seem hypnotic, chiefly, and large doses (2-4 grammes) sedative in cases showing excitement. Divided doses are also sedative in action. The former should, therefore, be given in all cases of insomnia without much excitement, and the latter when that condition is very pronounced.

8. Trional is not an analgesic.

9. At least, in therapeutic doses, it has no action upon the circulation, the respiration or the digestion. The secretions and the heat functions are only affected to an insignificant degree.

10. Slight symptoms of intoxication (vertigo, headache and unsteady gait) may follow the first dose, even though it be a small one (one gramme). Such symptoms usually pass away of themselves, and no not contra-indicate the use of trional, but merely call for care in its further administration.

NAVY DEPARTMENT, BUREAU OF MEDICINE AND SURGERY, WASHINGTON, D. C.

Changes in the Medical Corps of the U. S. Navy for the week ending November 30, 1895:

November 26.—Surgeon F. Anderson, detached from the Amphitrite and ordered to the Dolphin.

Surgeon P. M. Rixey, detached from the Dolphin and placed on waiting orders.

Surgeon J. E. Gardner, detached from Port Royal Station and ordered to the Amphitrite.

Passed Assistant Surgeon I. W. Kite, detached from the Franklin and ordered to the naval hospital, New York.

Passed Assistant Surgeon T. A. Berryhill, detached from the naval hospital, New York, and ordered to the Port Royal Naval Station.

A PRACTICAL STUDY OF THE BLOOD AND THE CIRCULATION, WITH A HISTORICAL REVIEW OF THE SUBJECT AND ITS BRIEF CONSIDERATION FROM THE STANDPOINT OF ITS CHEMICAL COMPOSITION, ANATOMICAL STRUCTURE, AND PHYSIOLOGY; INCLUDING CLINICAL STUDIES, AND EXPERIMENTAL RESEARCH ON THE LOWER ANIMAL.

BY THOMAS H. MANLEY, M. D., NEW YORK.

Continued from last number.

PART XIV.

THE VENOUS CAPILLARIES.

In structure and function there must be a difference in those capillaries which ramify through the skeletal structures, and those which course through the secreting or glandular organs. This is distinctly evident in the transparent, hyaline envelope of the pulmonary parenchyma of the reptalia.

The complexity becomes all the greater in the liver, where its main vascular supply is carried into it and from it by veins.

In the renal veins we observe the blood but slightly changed, and much the same color as the arterial.

As an artery finally breaks into capillaries it becomes thinned out so that nothing remains of the former tumics but the inner or endothelial layer.

Now, as we trace them into the venulae, we will find a reverse order of conditions; the terminal capillary as it advances towards the vein gradually undergoes a change in contour, in direction and in consistence; its course is less curved; its diameter widens, and we begin to notice that the quantity of basis substance between the elongated endothelial plates is in greater proportion. Still, as the primary muscularis of the venula is extremely delicate, the movement of the blood within it is readily seen, though on account of the deep tinge of carbon imparted to the corpuscles and plasma alike, these elements cannot be recognized. As we trace the capillaries on, in the direction of the large vein-trunks, it will be apparent that the movement of the blood becomes slower and slower as the larger tributaries converge into larger vessels. But it can be easily observed, as we examine different territories, that the rapidity of the venous current is not uniform; that in some places motion is nearly as rapid as in the arterioles; in others it is languid, while in others, again, there is an interrupted or irregular stasis. The former may be accounted for by a direct, abrupt anastomosis of an arteriole, with a venula; the blood making but an imperfect circuit. This feature of the capillary circulation was noted by Bernard and other physiologists, which led them to the conclusion that a considerable proportion of the blood passed directly from the larger radicles of the arteries to those of the veins, without making the full circuit of the systematic capillaries.

This arrangement of the vessels may be observed with great clearness in the peripheral vessels of the pulmonary parenchyma of the turtle, and, although on account of the density of the tissues and the amount of pigment present in the kidney and liver we have no ocular demonstration of its existence, there are good reasons for believing that it must exist over large areas in the renal structures.

THE AVASCULAR ELEMENTS AND STRUCTURES.

It is well known that, in infancy, childhood and youth, nearly all the tissues are highly vascular, and though it has never been determined, it is highly probable that, for the weight of the body, the relative proportion of the blood in the body is greater in adult life, and much greater at this epoch than after senile changes set in.

As differentiation of tissue in the course of development occurs, and growth is advancing, the demand for greater nutritive activity becomes manifest.

In the youth, the bone-marrow is of a red color, and highly vascular, the cancelous elements predominate

in the bone shafts, the peritoneum is thick, elastic and vascular; the whole frame-work of the body is pliant, and the organic elements are in excess in the solid structures. For some years after the period of full development is attained (usually about 20 years) a fair equilibrium is preserved, when physiological decay begins to become evident, and degenerative changes, so-called, appear. Now at 40 or 45 (though often earlier) vascularity of certain regions and organs begins to steadily diminish; the hair and teeth fall out, the skin atrophies in the lower extremities, the bones harden, the Haversian system is absorbed and the cavities become filled with an oily, yellow marrow.

If the compact cylinder of a bone shaft of an old man is as hard as ivory, its central bone corpuscles and their canaliculi have disappeared, and its feeble, vascular supply is from the periphery and the medullary membrane. Anatomically it is quite avascular. Physiologically, it is well-known that terminal elements readily undergo full transformation. Pathologically, in the aged, we may witness a similar change in the various structures. Tissue metabolism is defective, the interstitial blood vessels have undergone organic changes with embolic, thrombotic, or calcareous obliteration; in consequence of which the impoverished epithelial elements take on fatty degeneration in the evolution of their final total destruction. The ataxia of those advanced in years point to malnutrition of the nerves, the want of mental equipoise, to a lagging of the cerebral circulation. The condensation and firm setting of the osseous structures, leading to compression and narrowing in their vascular foramina and canals which come through them and lead to a final atrophy of the soft parts overlying them; as we may often notice in various situations, particularly the lower jaw, where in some, though the teeth may yet retain their hold in the sockets, the velvety vascular gums sink farther away from the crowns which loosen and fall out through want of this support. The only osseous structure in the body which escapes those degenerative changes of advancing years is the petrous portion of the temporal bone; without which provision of the economy the special sense of hearing would certainly be early lost.

Avascularity or diminished vascularity, then, is a physiologic condition through which nature prepares the body for that gradual descent back to the elements from which it came.

Our general conception of the circulation is that it everywhere permeates the tissues of the body, and that no tissue can survive without being freely penetrated by the capillaries; but this is certainly a mistake, as may be demonstrated as well in the living as in dead tissues. Besides the tendons, ligaments, cartilage and cornea, all the epithelial tissues are devoid of blood vessels; the same may be said of the endothelia which lines the vascular system and serous-membranes. The whole epithelial investment of all of the canals, the integument, the hair and nails, which are derivatives of the epithelia, are all devoid of a direct blood supply.

The blood courses fully through the loose lymphoid or cellular tissues, which is interspersed between the simple racemose and acinous tubules of the gland elements, but through the imbricated walls of the secreting cells it cannot pass. The interstitial elements, i. e., the connective tissue frame-work of smooth and striped muscles, conduct and support the fine blood vessels which in great numbers abound; but through the perimysium they do not enter; the spindles and basis substance of involuntary muscle and the striated tributes of voluntary muscles; receiving their vascular supply only after it has penetrated the protoplasmic corpuscles by inhibition or osmosis.

Diminished vascularity or avascularity, of various elements or organs, is an interesting study, to which attention must be directed in order to enable us to get more light on that deranged state of nutrition known as inflammation, the essential process of which yet remains a mystery. From the earliest beginning of studies bearing on this state, pathologists have almost invariably associated its phenomena with vascular disturbances, or

derangements of the circulation; but new facts are coming to light that point to the erroneous premises on which this view has been maintained.

Swift and destructive inflammation we will sometimes see in the avascular cornea. Endarteritis, pathologic and senile, we will often encounter, yet we know that the endothelia of the arteries are destitute of blood vessels. The calcified, brittle, non-vascular bone shaft of an old man will take on active inflammatory changes after fracture, throwing out an abundant ossific deposit, and thus welding the fragments together nearly as rapidly as the succulent, highly vascular shaft of a youth.

Relative and positive avascularity, as it will be later attempted to demonstrate, exercises an important influence on many deranged, physiologic conditions, and will explain many puzzling features in the course of regenerative and degenerative actions.

(To be continued.)

Society Reports.

CLEVELAND MEDICAL SOCIETY.

Regular Meeting, October 11, 1895.

THE PRESIDENT, DR. WILLIAM E. WIRT, IN THE CHAIR.

Dr. John M. Ingersol was elected to membership.

REPORT OF CASES AND EXHIBITION OF SPECIMENS.

Dr. Hamann: I have several specimens that are interesting from the point of view of the surgical pathologist, and I shall take the liberty of presenting them.

One of fracture of the neck of the femur in which union has taken place through the medium of fibrous tissue. The specimen is without history. There is considerable atrophy of the neck of the bone. The fibrous tissue can be very plainly seen between the head and the remaining portion of the neck.

The second specimen is one which was kindly presented to me by Dr. MeLean, of Elyria, O. It was taken from a case of tertiary syphilis. It shows the worm-eaten appearance. Multiple fractures had occurred. I think this bone had been broken two or three times. There is some union by means of fibrous tissue. It is interesting from an anatomical point of view as it illustrates the third trochanter.

The last specimen is one taken from a dissecting room subject, and I had an opportunity of seeing the arm before it was macerated. There has evidently been a fracture of the internal condyle and this part of the bone has been displaced upward. This arm presented the typical "gun-stock" deformity when the soft parts were in place. There is an illustration of this in the last edition of Hamilton's "Fractures and Dislocations."

Dr. W. J. Scott: How reduce that dislocation?

Dr. Hamann: If I understood Dr. Scott it was, how proceed to reduce the dislocation of the condyle. To overcome the deformity, Allis suggested treatment in the extended position. By putting it in the extended position reduction was said to be accomplished. I do not know that there is any special method of overcoming the deformity. The displacement, one would naturally think, would be downward, owing to the action of the flexor muscles arising from the internal condyle. Such is not the case, however. I do not know of any well adapted method of retaining the fragments in accurate apposition.

Programme of the evening was opened by an address on "Headache," by Dr. A. R. Baker.

DISCUSSION.

Dr. Knowlton: I have been troubled a good many times with these

cases and have occasionally unloaded them onto the ophthalmologists and specialists on nervous diseases. Sometimes they have come back to me benefited and sometimes they continued to worry me greatly. I have no doubt but that there is a vast deal of truth in what Dr. Baker has said. I have seen a number of cases that have been greatly benefited and some entirely relieved by the use of glasses. I am inclined to the belief that many of these cases of migraine sick headache have their origin in disorders of digestion and malassimilation, and I think that sometimes treatment rather supports that view. For instance, we pay strict attention to the diet and to the improvement of the general health, and we often find a great deal of improvement in cases where the eyes have not been used to excess. I can recall many cases, in the country, for instance, farmers' wives whose occupations from day to day would be about the same, and where the eyes would not be strained, yet these periodical headaches returned, and in some of those cases it is highly improbable that the trouble resulted from error of refraction.

I think there is something in the ideas as presented by Dr. Rachford, of Cincinnati, in a recent article on "Leucomain Poisoning," in which he details some experiments in nervous and epileptoid attacks and his method of treating these cases has resulted very satisfactorily. I am inclined to think that we have quite a large precentage of chronic cases of migraine that are due to faults of digestion.

Dr. Scott: I agree with Dr. Knowlton's opinion about many of these cases. I used to live in a very malarial country, and have seen those intermittent neuralgias coming once a day, or every other day, or every third day, and spectacles would not help them a speck. Good square doses of quinine in a little while would improve the general health, and this class of headaches would be removed at once. And so with children in school. You notice that almost always before they get the eye trouble they have some trouble with digestion. They become pale and anemic. They are worried by lessons and the dread of examinations. If they are taken out before accommodation is seriously interfered with, or before the eye-strain has begun, they would get well without glasses. I think that I have seen this frequently in little girls. Take them out of school. Their general health is worth more to them than the schooling they get under such circumstances. After they stay out of school a while their headache is gone whether they use glasses or not; and so I think it would be better to improve the general health under such conditions rather than to depend on the application of glasses and let them keep on going to school.

I agree with Dr. Baker that the general practitioner should become familiar enough with the ophthalmoscope to discover some of the influences of disease upon the eye. If he find the veins much enlarged and the arteries small, then there is some fault somewhere in connection with the cerebral circulation. * * * Twenty years ago I commenced using the ophthalmoscope to my own satisfaction, and sometimes to the advantage of my patient. I have sent many cases to Dr. Baker, when I could not determine from my own experience, and yet there are cases that I can determine. * * * In many of these cases little experience will inform a man who observes the conditions that there is something wrong.

In cases where you have hemianopsia I could determine that with my slight experience—or possibly that he has a tumor somewhere, or some disease of the optic apparatus or optic nerve that produced this condition. * * * If he has been syphilitic, it would be a very important matter to determine whether it was a tumor, because strong, vigorous treatment may cure it. After it goes so long no treatment will cure it. That is an important matter. As a great many people have a little syphilis, this may be a very important subject for that class of people. If we were all able to use the ophthalmoscope a little I think it would be of great advantage

to the profession, as well as to the patient.

Dr. Baker: There is just one point that I wish to call attention to, and that is, that the amount of headache, the amount of pain, or amount of discomfort, such as we have from eye-strain, does not correspond to the amount of error of refraction. In fact, where we have a large error of refraction we do not usually have these painful symptoms. It is where we have a slight error that we are more apt to have headache and other troubles. The only explanation I have been able to give may be illustrated in this way. If we hold our arm out steadily all the time we cannot hold it very long; but we could take a heavy ax and swing it all day long without much effort. A person who has a large error of refraction gives up and does not try to see distinctly; but the person who has a little error of refraction, keeps his eye toned up to that point he sees well. He makes a constant effort, and headache and other reflex troubles result.

SOME UNUSUAL CASES IN OBSTETRICS.

Dr. Powell: I was called upon at a late day by the secretary and asked to help fill up the programme of the evening with report of a few cases. I determined last night to select from recent cases of interest three in which I performed craniotomy. The selection of craniotomy cases was chosen simply because in these latter days we hear very little about the operation; almost as if it had gone to oblivion; very little is heard of craniotomy. Within a year I think I have had as many as usual to perform for one cause or another, and I am under the impression that these operations have been judicious, and if I am wrong, this is a very good place to be corrected.

In connection with these three cases of craniotomy possibly I might say a word in order to bring out a little discussion, if some of you have not already decided on points you are going to take issue with me.

With reference to the case of hydrocephalus, as a matter of course the thing to do was to perforate; that will not be questioned; there was no alternative.

With reference to the case of twins and the unusual condition of this locking of heads about the brim, even here, had both heads presented in this contracted pelvis the first one would have been prevented from getting over and becoming fixed, although time sufficient had been given. After examination had proved that this was the difficulty, I think it was impossible to deliver these children without perforating. * * * If, however, one had living twins in that position, would the operation not be Cesarean section, with the present status of the operation and the proper surroundings? If such a condition could be found a little earlier, would not the operation of Cesarean section be justified? There would be nothing in such a case to prevent rescuing (?) the two children, and I can see that the woman might be in good condition for operation. Of course, the operation of symphysiotomy would give no assistance in such a condition as this. With this prolapsed cord ceasing to pulsate, of course the thing to do was craniotomy, and a most difficult thing under these conditions.

Aside from these comments, there is the possibility that some of you gentlemen may think that the cessation of the heart beat of this last case would not justify one in doing craniotomy, but would prefer symphysiotomy. * * * It must be remembered that forceps had been applied during the night, and that such cases are not favorable ones for symphysiotomy, whereas they are very favorable for craniotomy, so far as the woman is concerned.

I apprehend that there may be a diversity of opinion about these cases and shall be glad to have criticism.

DISCUSSION.

Dr. Campbell: It is a little hard to criticise without being on the ground and helping to diagnose the case. The first one, of course, there is no objection to. The second case, the twins, there is a question just how they were locked. By some manipu-

lation it might have been possible to turn one of them feet foremost. In the last case I would like to inquire just how large the head was, what the presentation was, and what the relation of the head to the brim of the pelvis, how much the head would have been pressed out of shape in being delivered, and also how much force was used in the attempt to use the forceps.

Dr. Friedman: A man who had had the case over 24 hours only under chloroform was able to decide it was hyprocephalus. I presume that he is aware that Prof. ——— is able to make a diagnosis at 8 1-2 or 9 months, and if I am correct in my memory, in only 9 cases out of 125 was the diagnosis incorrect. Now if this statement is true, it is a wonder why it took so long for the doctors to decide if this was hydrocephalus. I have had many cases of confinement in which I have never been able to make any diagnosis without direct examination.

F. S. Clark: I have been very much interested in the report of these cases. It seems to me it is a very fine point to decide whether a man should do craniotomy on a living child, or symphysiotomy, or Cesarean section; but it seems to me when the child is dead, under any circumstances craniotomy is to be preferred to a high forceps delivery, and better than high forceps where the head is not engaged, because we have then only the mother to think of. Under these circumstances the danger to the mother is greater during a high forceps delivery than during a craniotomy, because there is greater danger of tearing the parts than to deliver a diminished head with the cranioclast. * * * It was never thought of doing a high forceps delivery on a dead child. And craniotomy gives the least danger to the mother.

In the case of the twins, the question came up in my mind just how much the lessening the diameter of the head by perforation was going to relieve the locking. If the child were dead, we would not think of symphysiotomy or Cesarean section.

Dr. Tuckerman: There is one point in the relation of a living and dead child to a labor, and that is the aid which the live child constantly renders to its own delivery. You place your finger on the head and you will find the living child is twisting its head around and around to find the easiest place for its head, and the easiest place for its head is always the way out. We have always noticed this. But one of the obstructions to the delivery of a dead child is the fact that the child cannot help itself in that way. I think the doctor's position is correct, that with a dead child craniotomy is the easiest way out.

Dr. Sawyer: I do not know that I have anything different to offer. The fact of craniotomy being applicable to dead children is received everywhere; the question is whether craniotomy on living children should be performed. That, of course, depends upon circumstances. If the operator is at hand I think that statistics show that Cesarean section is more desirable than craniotomy, but craniotomy can certainly be performed by men who would hesitate to undertake Cesarean section. It can be done without injury to the mother, recognizing, of course, that there is not such a degree of traction as to render the operation inadvisable.

In regard to the active efforts of the child being made, I would suppose that was very largely dependent on the degree of contraction of the womb; and I do not know that the turning of the head here and there is any result of the child's efforts to free itself from its present situation. I do not know that I have anything new to offer. It seems to me the whole discussion of craniotomy turns on whether the child is living or dead. Where one might be competent to do craniotomy, he would not feel himself competent to do Cesarean section. I do not know that there is any criticism to make on the cases of Dr. Powell. He does not say whether he made any effort to ascertain whether the child were dead or living until he introduced his hand. All that is a matter, perhaps, of each one's individual notions, but it would seem to me it would have been entirely proper for him to have

made an external examination to discover the condition of the circulation of the child, and quite possibly he might have discovered the fact that there were two children instead of one if he had made a careful external examination.

Dr. Powell: Relative to this question of the influence that the death of the child has upon labor. It is pretty well recognized that there is an influence. There is less tonicity to a dead child. A living child, by its tonicity, aids delivery, and also by its movements incites action of the womb.

The point suggested by Dr. Campbell, as to whether twins could not be turned. I doubt whether the doctor really meant that. You cannot do very much in turning twins, especially with the heads locked. * It must be remembered that these were not the classical locked twins. There the locking is in the true pelvis—here the locking, as we call it, was above the brim, and so firm (?) as to make it utterly impossible to move that head to the brim, and then the prolapsed chord settled the matter, so far as that child was concerned, and made perforation the only hope of getting the second child alive.

With reference to the diagnosis, I will state that Dr. Mabley said to me that he thought it was possible that he had twins there a day or two before, believing he had heard two fetal hearts. We made careful examination at the time of operation, but the relations had very much changed. With the labor pains things are very much mixed, so that it is not always an easy matter to determine twins. Twins are generally a surprise to everybody, although I have diagnosed twins a little while before confinement.

With reference to the position of the head in the last case, it must be remembered that attempts at delivery had been made at various times through the night. Forceps had been applied by a pretty strong man. The head was in the first position, but had made no progress in entering the brim. It was fixed by the tonicity of the womb. I made all the efforts with my forceps that were justified after that history.

The Times and Register.

Weekly Journal of Medicine and Surgery.

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PHILADELPHIA, DECEMBER 21, 1895.

IS THE BACTERIOLOGICAL THEORY OF DISEASE WANING?

It is an old saying that "every dog has his day," and it seems to be equally true of medical theories. We have observed during the past year that much has been said by the most eminent of authorities tending to express doubt as to the invulnerability of the germ doctrine as the sole cause of disease. The ultra germ theorists are dropping out of sight and allowing the more rational facts of cli-

matic and atmospheric changes as producers of disease full sway in the theories of the present day.

It was not long since a simple catarrhal inflammation of the nasal passages, commonly called a "cold," was considered the result of bacillary invasion. We now are called upon to consider the influences exerted by draughts, sudden changes in atmospheric temperature and other unhygienic conditions, reverting to the former days when these surrounding elements were looked upon as the sole authors of disease.

But our forefathers were not always so far out of the way in their reasoning, and there were no greater fools in a century back than sometimes exhibit themeslves at the present time. The one great failing with the individual members of the profession of the nineteenth century is the inordinate desire for notoriety and the consequent tendency it exerts for rushing forward with every new theory until it becomes a veritable fad.

Fads are often instructive and usually safe enough if not carried to excesses. So it is with the germ doctrine. We have bacilli and bacilli—innumerable quantities of them—growing in such situations as best support them by favorable environments. Probably many of them produce toxines. Undoubtedly many are harmless. Possibly some may even be termed curative by their antagonism for those that are virulent. But all this does not refute the fact that the bacillus, of whatever genus he may be, cannot find in the purely healthy human blood cell a favorable field for his cultivation and growth. That must be sought for in the degenerated corpuscle.

We must study then the various causes which influence the degeneration of the blood cell if we would get at the real prime mover in etiology. These are undoubtedly more or less controlled by the sensory nerves acting through outside stimuli and explains vastly better how the production of a "cold" may arise from draughts, bad air and warm winter storms.

It is, however, among the contagious diseases that the claims of the germ theory seems to have its strongest hold for recognition; but when one stops to think that pure air and thoroughly oxygenated blood are the best preventives for contagious diseases, it will be readily understood how we may find specific germs early in a given disease without their proving more than symptomatic phenomena.

THE RECTUM AND THE SPECIALISTS.

In a late issue of the New York Medical Record a most interesting and timely contribution appears from the pen of Dr. Charles B. Kelsey, in which he takes a most dolorous view of the future of the rectal specialist; or, as he quaintly styles him, the "Pile Doctor." No, the members of the American Medical Association have some faint shadow of common sense left, and will not give the rectotomists a section to themselves. It is true, as Dr. Kelsey says, that we have a quarterly journal, presumably devoted to rectal surgery; but the founder has deemed it advisable to extend its domain further up, to the large, small intestine, the gall bladder and stomach. But it is a periodical of above the average merit, well written and ably edited. If there be room for treatises on the rectum, why not journals? We are and have been overdoing specialties, and those who "sowed the wind are now reaping the whirlwind." The wail is raised that we have too many rectal specialists; but what do those mean, who themselves profess to practice and teach nothing else, than the lesions occupying the anal opening in the buttocks, and advertise for students to come, qualify and put up their cash?

It will be admitted that "six weeks" is rather short time to turn out a full-fledged specialist on the rectum, but let it not be lost sight of that to those who come from the far West, with their loss of time, transportation and other expenses, it means a considerable outlay; and then, after all, are they not specially trained, or why so certify on their

diplomas? As a matter of fact, he, who attends daily on a "rectal clinic" and cannot master the technique of the operations for piles, fistulas and fissures, never will. He, however, is a dangerous character to let loose on the community, for the reason that he is liable to mistake consequences for causes. The truth is that he who would most successfully master the treatment of ano-rectal diseases must be a good all-around surgeon, who will not hesitate to excise the sacrum or perform any of the operations on the pelvic organs or genito-urinary organs of the female. In such hands we agree with Dr. Kelsey and a patient is safe who has diseases in the lower intestine. Let us have the trained surgeon first, and the rectal specialist next; and if it be desirable to reduce the number of rectal specialists and "orificial surgeons," demand of them before they enter your portals for study their passport, showing that they have the former qualifications.

In the present condition of things, when the medical colleges, like the railroads, are consolidating their forces and threaten to extinguish the general practitioner by an excess of hospitals and free dispensaries, in their despair and desperation, they turn to specialties, some of which are regarded little better than are other forms of respectable quackery.

If "special courses," which are everywhere advertised and placarded, are not operated to make specialists, then, in heaven's name, for what are they?

Come, let us be honest about this matter, for it is time that the fashionable city specialist should be frank and tell his audience, more humbly placed in a far-off village many are, that they misunderstood him and are laboring under a misapprehension, and that the only course to success in his line is over the long, tortuous course of a five or ten-year apprenticeship in general surgery. Our leading gynecologists have not always been original or great surgeons, though the world over, capable surgeons must of necessity be gynecologists, or, in other words, master the mechanism of technique of any sanguineous operation wherever located.

Happily, with the curriculum now in force in most medical colleges, it looks as though a medical degree in America would mean something, and specialists hereafter will have to make way for a class of practitioners ready to successfully cope with a large class of cases heretofore turned over to those in special branches.

Electro-Therapeutics.

IN CHARGE OF

DR. S. H. MONELL, Brooklyn, N. Y.

THE EFFECT OF FARADIC SEDATION IN LOCAL INFLAMMATION.

It used to be taught that electricity in any form was contraindicated in all cases of inflammation, and when it was announced that some new effects could be obtained by certain modifications of the well-known Faradic apparatus sedation, unloading of congested and inflamed tissues, lowering of temperature, etc., it was received with much doubt and approached with temerity. The wide discussion of coils, vibrators and other details of the new high-tension batteries, so familiar to those who have kept pace with the recent advances in electro-therapeutics, makes it unnecessary to more than allude to it in a brief record of observations coming within the scope of this paper. The writer will only say that the effects claimed by some observers, said to be obtained with coarse wire coils with few windings, and with the primary current, which are generally supposed to be possible only with long, fine wire coils, and very rapid vibrations, must, to the average reader, seem very misleading. With a liberal allowance for inaccuracies of observation as to the pathological conditions in the cases cited, some of the effects obtained can be explained in this way; that the long and continual use of any stimulation may, under certain conditions, produce sedation and reduce inflammation—

cold and heat are familiar examples. In our enthusiasm over a new-found remedy we are prone to forget that any one agent that is to become the panacea for all ills is not likely to be found. Electricity has its limitations as well as opium. We have, however, in the new high-tension apparatus a very useful agent, but one that needs very careful study, not only of the instrument itself, but of the conditions, physiological and pathological, to decide its appropriate use, and upon which success in its use most emphatically depends.

My own observations have been largely confined to gynecological cases, though many others have been observed and may be offered in another section of this paper. Case 1. Mrs. C——, age 25; was called on account of severe pain and vomiting; found great depression, temperature 103 degrees, severe pelvic pain, had been vomiting for several hours. Suspecting the cause to be pelvic, made examination under an anesthetic, as the patient could not be touched, so great was the pain and tenderness. The left ovary could not be mapped out on account of a large mass of exudation filling that side of the pelvis, and crowding the uterus well over to the right side. There was evidence of an old endometritis, and the conclusion was that we had a case of parametritis of probable septic origin, and that the pain and vomiting was caused by pressure upon the ovary from the adhesions and exudation. A bipolar electrode (modified from the well-known Apostoli electrode), with bifurcated cord, and connected with positive pole of a high-tension Faradic battery, was introduced per vaginam, and a suitable pad, 6 by 6 inches, placed over the solar plexus, and with single cord attached to the negative pole. It may be well to state in this connection that the secondary coil used was composed of 1541 yards of No. 36 wire, that the primary was excited by six chlorid ammonium Sampson cells (these cells have a high ampereage), controlled by a rheostat in the battery circuit, and the vibration was capable of very fine adjustment and very rapid vibrations. A seance of twenty minutes was given, affording great relief from pain and entire cessation of vomiting, and lowering the temperature to 101 degrees. The applications were repeated every two to six hours, as indicated, for two days, resulting in such amelioration of all the symptoms that the patient became entirely comfortable and free from pain except when an effort was made to move about. Temperature normal; no vomiting. Applications were continued twice daily for ten days, when galvanism was employed to remove the exudation by electrolysis. It is only fair to say, however, that the Faradic current was continued daily, and no doubt contributed materially to the ultimate removal of all the adhesions and exudation, restoring to health a case which ordinarily would be considered a subject for a hysterectomy, as soon as the patient could be got in a condition for operation.

Case 2. Miss R——, age 40; applied for relief from severe pain in left iliac region; temperature 102 degrees; gave history of soreness and inclination to stoop with pain when an attempt was made to stand erect. For twelve hours previous to being seen (June 4, 1895) pain had been severe, which was only partially relieved by 1-4 grain morphia. Examination per vaginam showed great tenderness—could not allow any pressure over left iliac region. The left fallopian tube was enlarged and very painful, a hard exudation filling Douglass cul-de-sac, and also above the bladder, the latter causing great pain when the urine was voided. The diagnosis was pyosalpinx, with parauterine inflammation. Bipolar faradization was given for thirty minutes, with great relief from pain and reduction of temperature to 99 2-10 degrees. The patient slept two hours, and upon awakening complained of only a partial return of pain; temperature 100 degrees. The application was repeated, and again followed by relief of pain and lowering of temperature to 99 degrees, and a longer period of comparative comfort. Treatment continued every four hours for two days. By this time active inflammation had subsided, and nega-

tive electrolysis was employed to evacuate the tube into the uterus. This measure proved successful, the patient reporting next day a discharge of two or three ounces of thin pus per vaginam, and an examination proved that the tube had been evacuated. The faradization was continued every other day, which, with appropriate galvanism, disposed of the exudation and adhesions. Curetting was advised, with the view of disposing of the endometritis, facilitating drainage of the tube to prevent a recurrence. This the patient has so far declined to do.

Case 3. Mrs. N———, aged 24. When first seen patient complained of severe pain in the head and back; pulse, 120; temperature 104 degrees. Gave history of occasional dysmenorrhea, and, as her menstrual period was then due, it was apparent that the cause of her suffering was due to extreme congestion. Hot vaginal douches were ordered, and pot. bromide, followed by morphia. After four hours with no relief, bipolar faradization was resorted to, with considerable diminution of pain; repeated in two hours, with the effect of bringing on the menstrual flow and complete subsidence of all pain, abnormal temperature and nervous distress. The usual period for these applications is fifteen minutes, governed, however, by circumstances, of which the attendant must be the judge in each particular case. Points for consideration are the pathological conditions present; what is desired to be accomplished; frequency of applications, and a thorough conception of the power and limitations of the apparatus used. It is a great mistake for any one to expect uniform favorable results from the use of periodic currents, or, in fact, any form of electricity, till the principles of electrophysics are well understood, and for gynecological work the special training and experience which must constitute the equipment of a successful specialist should always include the other necessary attributes of a good physician.

O. S. PHELPS, M. D.,
New York.

TRANSLATIONS FROM

Foreign Exchanges.

BY DRS. CHANDLER AND DAVIDOW.

SHORT NOTICES FROM EVERYWHERE.

Professor H. Schmidt-Rimpler, in the Berliner Klinische Wocheuschrift, No. 45, has a lengthy article on the employment of powerful electro-magnets for the removal of splinters of iron and steel from various portions of the eye. The history of the operation dates back to the middle of the seventeenth century, when Fabry, of Hildenheim, recorded the first known case.

Hirschberg, in v. Graefe's Archiv. f. Augenheilkunde, Bd. 36, Heft 3, first brought the operation into prominence by detailing results in one hundred cases where he used the electro-magnet for removing iron particles from the eye. Professor Haab, in his paper read before the Congress of Ophthalmologists at Heidelberg, mentions one especially interesting case. By using the enormously-powerful Ruhmkorff electro-magnet of the physical institute of Zurich, he was able to draw an iron splinter from the vitreous to the interior chamber of the eye, whence its extraction was but a simple matter.

Professor Rimpler mentions and comments upon seven cases of his own where the electro-magnet was used, and draws the conclusion that it should be employed in all cases where the removal of iron particles is likely to be attended with any difficulty.

In the transactions of the Viennese Imperial Society of Medicine is a very remarkable case, which was presented by Dr. Porges. In July, 1890, a patient came to him, who presented most indubitable symptoms of pyloric cancer. An operation was decided upon, and performed in August by Professor Mayal, who found the cancerous mass so extensive that he was obliged to resect nearly the totality of the stomach to insure its complete extirpation. A microscopical exami-

nation showed the cancer to be of the scirrhous variety. Up to the 18th of October, 1895, the patient had had absolutely no signs of any relapse, and had vastly improved, both in appearance and in general health. Before the operation he weighed only 56 kilos, and he now tipped the beam at 80 kilos.

Professor Kolisch (idem) discussed gout and its treatment. He first demonstrated that as long as the kidneys are unchanged the final products of the nuclein are eliminated in the form of uric acid. When the kidneys are affected the formation of uric acid is diminished, and the alloxuric bases (bases of the xanthin group) come in its place. Kolisch calls the combination of uric acid and alloxuric bases "the alloxuric substances." These are always in excess in the uric acid diathesis, this being caused especially by the increase of the bases which have an intense toxic influence on the kidneys, as K. has experimentally proved. Its clinical manifestations are what Neusser calls the perinuclear basophylic of the blood and the increased elimination of alloxuric substances in the urine. These substances are toxins which are at first destroyed by the kidneys, but which, in the long run, cause an alteration in the kidney itself. Part of these substances is eliminated under the form of base and the rest as uric acid. This renders clear the reason why different authors have found varying quantities of uric acid in gouty patients, since a part of the nuclein was eliminated as bases of the xanthins and not as uric acid.

As to the therapy, a specific treatment of gout is hardly possible, for there is no known remedy that will lessen the natural hyperproduction of the nuclein. Anything that would tend to increase it, as soups, beef extract, asparagus, fatigue, abuse of food or alcohol, must necessarily be avoided.

A simple and moderate diet, with moderate exercise, milk, starchy foods, fat meats and a few vegetables, is to be highly recommended.

We have received the first two numbers of the Independence Medicale, a weekly, launched by A. Maloine, the well-known publisher of medical books, in the Rue de l'Ecole de Medecine, in Paris. If it continues as it has commenced it will be in the front rank of the French medical journals. There is so much of interest in it that we scarcely know where to commence to cull. On page 14 there is an abridgement, one column in length, of Dr. W. R. Dunham's paper on "The Operative Principles of Medical and Biological Science," which appeared in the Times and Register of October 19.

Sawicky (Przeglad Chirugiczny, vol. 11, pt. 3) reports a case where the midwife mistook the breech of an infant for a vertex presentation. The child was delivered in a few hours with a ruptured perineum. One month later S. was consulted, for the child suffered from incontinence of urine and of excrement. Examination of patient showed a cystocele, cicatrization of the perineal tear with a vaginal opening and a slight prolapse of the rectum. The anus was wounded, the tear going as far as the external sphincter. Tait's operation was performed. The anterior portion did not heal, so the vulva remained gaping, while the posterior portion of the perineum and the anal ring took on their normal appearance. There was no longer any incontinence either of urine or of feces.

Perineal tears are of more frequent occurrence in breech presentation than is generally supposed, and is usually caused by the midwife mistaking the anus of the child for the mouth of the womb and dilating it with the fingers.

Dr. Max Fleisch, of Frankfort (Berliner Klin. Wochenschrift, No. 43) notes a very odd case of diphtheria of the skin. A little girl, who had been scalded on the neck, was kissed there by her mother while the latter was changing the bandages. The next day the mother complained of sore throat, which rapidly took on a diphtheritic character. Three other

members of the family also fell sick with the same disease, yet there were no throat symptoms in the child.

An edema of the skin and subjacent cellular tissues caused a microscopical examination of the serum to be made, and this was found full of colonies of diphtheritic bacilli.

CHANDLER.

THE THERAPEUTIC APPLICATION OF ZITTMANN'S DECOCTION IN SYPHILIS OF THE NERVOUS SYSTEM AND OTHER DISEASES.

A. Eremjew. Wopenno-Med. Shurnal, 5, '95.

Author received favorable results with the decoctum Zittmann's.

The dococtum is ordered in two forms:

1. Decoctum Zittmann's fortius: Radicis sarsaparillae concisae et contusae, 360.0; aquae communis,26 L. S.; sacchari alba et aluminis aa, 24.0; hydrargyri chlorati mitis, 24.0; cinnabaris preparatae, 8.0; coque ad colaturas libras cca, 9 1-2 liter; sul finem adde fructuum anisi sulg. contus, 15.0; tinct. feniculi cont, 15.0; tol. sennae, 90.0; rad. glycyrrhizae, 45.0; colaturae sint, 8.640 liter.

2. Decoctum Zittmann's mitius: Rad. sarsaparillae conc. 180.0; residui specierum e decocto fortiore; aquae communis, 26 lit. coque et colat. libr. 9 1-2 lit.; sul finem adde cortic fruct. citri., cort. cinamomii cossiae, fruct. cardamomi min., rad. glycyrrh. aa, 12.0; colaturae sind 8.640 liter. Frequently the senna was left out entirely.

Mornings each patient drank one pound (Russian—0.90) of the strong, and in the evening one pound of the weak decoction. On an average the treatment lasted one month, then a pause was taken, and if some symptoms still persisted, another similar treatment was given. The favorable results obtained from the decoction were not only in the disappearance of symptoms of the central nervous system, but the subjective symptoms improved visibly, appetite improved and the patients gained considerably in weight.

From the experience of the author it must be accepted that the action of the docoction is not due only to the mercury present, or the influence of the hot drinks, but more to be attributed to the plant elements, above all the sarsaparilla, which positively acts as a tonic, and assimilation is hastened.

Author enumerates cases to illustrate his conclusions.

ANATOMO-PATHOLOGICAL CHANGES IN THE BRAIN IN CHOLERA ASIATICA.

F. Tschistowitsch. Wratch, No. 22,'95.

Pieces of brain substance hardened in Miller's fluid showed unmistakable changes. The nerve cells slightly edematous, some cell-nucleus absorbed, their chromatin resulting in an indistinct contour, until some of the nucleus cannot be detected at all. The nerve fibrills and neuroglia have hardly any changes. The small arteries, veins and capillaries are overfilled with blood, the perivascular lymphatic spaces widened and contained granules of pigment and extravascular blood, which was mostly formed in the brain substance. The most striking changes are found in the frontal and paracential convolutions.

The following jubilees will be celebrated in Russia during the year 1896: October 8, 30-year activity of Prof. I. I. Bistrowa; 25 years activity, February 17, Professor K. H. Vinogadowa; February 9, Prof. H. A. Kruglewski; July 12, A. I. Danilewski, and July 6, M. D. Lawdowski.

At the annual meeting of the Russian Pirogoff Surgical Society, held May 17, Professors A. I. Jarenetzki and Yurlt were elected as honorary members.

The Moscow University resolved to take part in the international subscriptions for the bust of Prof. Leuckart.

The amount allowed for the twelfth International Medical Congress was reduced from 50,000 to 30,000 rubles.

In Redactor Shurnal Wratcha, Poluchil Nomera 43 i 44. Blagadaru.
A. D. D.

Miscellany.

ON THE TREATMENT OF CROUPOUS PNEUMONIA BY DIGITALIS.

Dr. Hans Naegeli-Akerblom, Ruti (St. Gallen) (Centralblatt f. innere Medicin, No. 32, August, 1895). The author quotes the experience of Professor Petrescu, who has obtained the best results in pneumonia from the free administration of digitalis in pneumonia, in doses of 1, 2 and 3 drachms, in the form of infusion. Petrescu calls this the therapeutic dose; but of 1192 cases treated thus in the Bucharest Military Hospital, the mortality in thirteen years varied from 1.2 to 2.6 per cent. The crisis generally occurred as early as the third day. These results are contrasted with those obtained by other methods; bleeding, expectant treatment, etc., and statistics are discussed at length. Akerblom points out that Petrescu's results are partly to be accounted for by the fact that his cases occurred in patients in early manhodd, who had further given proof of vigorous health and good physique before their admission to military service. The author saw the digitalis treatment extensively used in Professor Massini's Clinique, but other means were used in many of these cases—e. eg alcohol in large doses, cold compresses, wet packs, etc. After this he used digitalis largely in his own practice, and he tabulates his results from May, 1893, to May, 1895. Between the ages of 1 and 50 he had no death from simple, uncomplicated croupous pneumonia. He began treatment with digitalis to slow and regulate the pulse and to control the pulmonary circulation. Digitalis acts (1) by its action on the left ventricle, by constricting the capillaries; in the latter particular, in fact, by regulating the flow to and from the lung capillaries, acting very much in the same way as blood-letting. (2) By direct stimulation of the vagus it acts on respiration. The author is doubtful as to its antipyretic action. He quotes Jaksch's observation that leucocytes are increased in croupous pneumonia which runs a favorable course, and he therefore recommends the exhibition of antifebrin antipyrin or pilocarpin, to increase the leucocytes. Cold baths also (according to Winternitz) have this effect. This view is not shared, however, by Biegansky, though Carini, Chatenay and others support it. The author experimented on animals, and found that in healthy animals (and also in healthy men) digatilis increases leucocytosis. The conclusion he draws are as follows:

(1) Digitalis is one of our most valuable therapeutic agents in the treatment of pneumonia.

(2) It acts favorably on the heart, lungs and blood.

(3) Used in large doses it shortens the course of the disease.

(4) In large doses it is markedly useful in increasing the leucocytes, and especially by favoring polynucleation. Single doses of one gramme (16 grains) twice to four times daily may safely be given.

(5) The employment of cold water with the treatment by digitalis is very useful, and is a further means of promoting hyperleucocytosis.—London Practitioner.

SOME APPLICATIONS OF GUAIACOL.

From the London Practitioner.

Guaiacol, one of the ingredients of creosote, has lately been recommended as a local anesthetic. Blaise (Presse Med., April 10, 1895) and Lucas-Championniere (Bull. de l'Acad. de Med., July 30, and Pharm. Journ., Aug. 10, p. 134), recommend a solution of the drug in sterilized olive oil (1 in 10 or 1 in 20) as a local anesthetic, to be used like cocaine by hypodermic injection. For the removal of teeth, small tumors, etc., it was found that perfect anesthesia was obtained, and it is claimed that the anesthesia obtained by guaiacol is as perfect as that obtained by cocaine, whilst ten times as much of the for-

mer can be used without causing symptoms of poisoning. It remains to be seen whether these observations will be confirmed by other surgeons.

In gonorrheal orchitis the pain is readily relieved by the following formula:

R—Guaiacol ..... 1½ drams
Vaseline ..... 4 ounces

This should be applied three or four times a day in the inguinal region or on the internal surface of the thigh.

The External Application of Guaiacol.—Brill (Centralblatt fur innere Medicin, 1894, No. 47, p. 1097) has employed guaiacol by external application in four cases of pneumonia, five of typhoid fever, four of pulmonary tuberculosis, one of bronchitis and two of articular rheumatism. He found that the remedy in doses of from 23 to 45 minims could be relied upon energetically to reduce the temperature, although it also caused extremely unpleasant secondary manifestations. In eighteen other cases, principally of rheumatic character, the agent in doses of from 12 to 24 minims exercised an analgesic influence without unpleasant complications.

In the treatment of pleural effusion Segalea (La Medicine Moderne) has employed with success topical applications of guaiacol in the following formula:

Guaiacol ..... 36 minims
Tincture of Iodine..... ½ dram
Glycerine ..... ½ dram
M.

The applications are made by means of a brush to the entire posterior aspect of the chest, which is then covered with cotton and an impermeable dressing and a bandage.

In a case of anasarca, with anuria, consequent on scarlatina, in which other measures had failed, applications of the following combinations were soon followed by relief:

Guaiacol ..... 16 minims
Glycerine ..... ½ ounce
M.

CHANGES IN THE STAFF OF THE PHILADELPHIA HOSPITAL.

Dr. William B. Porter has resigned after twenty-five years, and Dr. Alfred C. Wood has been appointed as his successor; Dr. J. C. DaCosta has been appointed surgeon, and Dr. E. B. Sangree, pathologist. Dr. Copeland, who was formerly pathologist, has accepted a chair in the Vanderbilt University, at Nashville.

KEIL'S MEDICAL, PHARMACEUTICAL AND DENTAL DIRECTORY.

George Keil, editor, Philadelphia, announces the early publication (fourth edition) of Keil's Medical, Pharmaceutical and Dental Register-Directory and Intelligencer, for Pennsylvania, New York, New Jersey, Maryland, Delaware and District of Columbia. Its list of national colleges, State hospitals, homes, dispensaries, societies and post office addresses of physicians, druggists and dentists, school of graduation and year, all the latest laws in these States, will be complete to date of issue, as a personal canvass will be made for data. It is the only Directory published for above-named States, registering graduates of all schools, physicians, druggists and dentists, and imparting all information needed by the professions mentioned in their daily practice. No effort will be spared to make the Directory complete, and the information accurate and reliable in the minutest detail belonging to the domain of medical, pharmaceutical and dental professions. An experience of thirty years is a sufficient guarantee that all subjects will be properly treated in Keil's Directory. The names in large cities, in addition to being in alphabetical order, will be numerically arranged by streets; also an alphabetical list of names of the whole Directory, giving the page of each; these features will no doubt be appreciated.

The Times and Register.

Vol. XXX. No. 26. Philadelphia, December 28, 1895. Whole No. 903.

Original.

A PRACTICAL STUDY OF THE BLOOD AND THE CIRCULATION, WITH A HISTORICAL REVIEW OF THE SUBJECT AND ITS BRIEF CONSIDERATION FROM THE STANDPOINT OF ITS CHEMICAL COMPOSITION, ANATOMICAL STRUCTURE, AND PHYSIOLOGY; INCLUDING CLINICAL STUDIES, AND EXPERIMENTAL RESEARCH ON THE LOWER ANIMAL.

BY THOMAS H. MANLEY, M. D.,
NEW YORK.

Continued from last number.

PART XV.

THE CONTENTS OF THE BLOOD-VESSELS AND THEIR MOVEMENTS.

During the past twenty years the study of the corpuscular elements of the circulation has engaged the attention of many investigators, particularly in France, Germany and England.

We have theories almost without end on their origin and mode of development, but the precise functions which they subserve are not yet well known, nor have we a definite classification or division of the blood corpuscles. My own studies and research lead me to the conclusion that the morphology of the blood is even now on anything but a sound basis.

A gain was made when the amoebic properties of the leucocytes were discovered, but later critical studies prove that there are at least four or five different varieties of them.

To Hayem is given the credit of discovering the third corpuscle, or "hematoblast." But there can be little doubt but later observations will demonstrate that there are many other corpuscles presenting distinctive characters not yet isolated, and some of which are not yet discovered.

It is certainly true that there are many bodies seen with distinctiveness, and in considerable numbers, in the moving circulation, which vanish or are seen imperfectly, if at all, in blood withdrawn from the body. Other corpuscles there are of various dimensions that present themselves only as spectres, their ghostly shadows fading out of sight almost instantaneously after we have localized them.

Many have concerned themselves with the problem as to whether or not the blood is a tissue, or whether the corpuscles are cells, and, if such, whether they are capable of renewing themselves by nuclear proliferation. But we are unable to see any nucleus in the colored corpuscle of most of the mammalia. This fact, however, does not prove that it does not exist. When appropriate reagents are forthcoming, for which this element of the protoplasm has an affinity, it will probably appear, for there is no reasonable explanation for its absence in man.

The blood is spoken of as a fluid,

which it is, physically, while in the vessels; yet, strictly speaking, it is not any more than a metal is a fluid when reduced by heat, for it contains many solids which constitute a large part of its bulk. Blood is life in more respects than one.

To suppose that it merely serves as a vehicle for the conveyance of nutritious elements to the tissues and residuary products to the emunctories, to be thrown off, is altogether too simple a view to take of the subject. There can be little question but its purposes are more complex and varied, that it is the centre and soul of our very existence, intimately associated with many phenomena now presumed to be dependent on other sources.

As Hunter and others well described it, it is, indeed, the "vital fluid" that animates and preserves all.

Its study is yet one of a most fascinating interest, however we may view it.

My purpose at present will be to consider it rather from a mechanical standpoint than to deal in detail with debatable features of the subject, or enter at length on the physiological properties of the corpuscles. This was my object when I undertook a series of experiments during the past year; but, as the work advanced, the study of one feature led to the notice of another, and I soon learned that my own early teachings on the subject, in many respects, had been deficient and faulty, and that to one who had the leisure and training the study of the blood, either from its interest and value to the surgeon or the physician, was a subject of transcendent importance.

It was surely evident that the subject can be pursued on the living animal, in the normal state and under a vast multiplicity of conditions. As a matter of fact, except from a bacteriological standpoint, certain features of the blood corpuscles can only be critically and reliably examined under normal conditions in the living animal.

The blood corpuscle is a vitalized substance of exquisite sensitiveness, and probably every one of them is individually endowed with special characters, too fine and delicate to be revealed by any means as yet at our command. In the vessels they are influenced by thermal, chemic, electric and vital forces, which are deranged, and they perish the instant they leave them.

The red blood corpuscles are carriers of assimilated materials, changed and unchanged, from one structure or organ to another, and are particularly concerned in the absorption of oxygen in the lungs and carbonic acid in the tissues.

By some rather obscure effect, produced by a magnifying lens and condensed rays of light on the round corpuscles, they appear of a faint yellow instead of red.

They are not of uniform size, although their relative proportion in the plasma remains remarkably uniform in the healthy state. Under high power they are seen to be granular, faintly reticulated and without a limiting investment.

It is unnecessary to say that the living, moving red corpuscle can only be critically examined in the vessel, and when removed and mounted it has undergone such molecular changes as to leave a doubt whether the condition is normal or not.

As a matter of fact, there has been too much generalizing on the elements which we examine in dead tissues, and applying the deductions derived therefrom to living parts.

The red corpuscle is supposed to be a passive body, only moving in response to a current of plasma, in which it floats; but this is entirely an error, for it most certainly possesses many ameboid characteristics, for it is ever changing its form in the capillaries and plasmic current, through which it flows, outside the capillary. In the capillary wall it engages and makes its way out through the stoma by a sort of corkscrew action. And, after it has finally escaped, it can be easily seen to move about in various directions, and later approach the capillary wall from without, and again move on with the circulatory tide.

Diapedesis of the red corpuscles, physiological and pathological, is ren-

dered possible by this property of the red corpuscle; besides, in many situations and under various circumstances in health, the shape of this globule is constantly changing.

(To be continued in the next number, January 4, 1896.)

THE GERM THEORY OF DISEASE A MISCONCEPTION AND VAGARY.

By W. R. Dunham, M. D., Keene, N. H.

The alleged bacterial cause of disease, while small as an object lesson, has attained great proportions in the field of visual research. The late Professor Tyndall, commenting on such relations, states: "Indeed, previous to the discoveries of recent times medicine was not a science but a collection of empirical rules, dependent for their application upon the sagacity of the physician." Yet, notwithstanding what may be said by such distinguished authority, medical science is no less a problem than before such discoveries; in fact, the mind has been led away from first principles into the domain of experimental facts, imperfectly represented in their relation to medical science principles. Thus, to consider the germ doctrine in the light of operative principles, which underlie all facts, it may be of advantage to make use, more or less, of some alleged truths as presented by different authorities, and, later, endeavor to find some basis of interpretation that may help us to understand their relation:

(a)—"It was found that diphtheria was not caused by the germ itself but by specific poison which is produced by the microbe, and with artificial cultures when filtered and freed from germs the culture fluid is just as poisonous as the germs themselves."

(b)—"We find this antitoxine in the fluid portion of the blood, and this serum in small quantities is very powerful."

(c)—"The liquid of the cultures changes from alkali to acid, and from acid back to alkali and when the alkaline fluid is injected into a rabbit it proves fatal, while the same fluid changed to an acid is harmless."

(d)—"In the cultivation of bacteria in artificial media outside the body it was determined that their virulence became diminished to such extent that they ceased to be fatal on inoculation into susceptible animals but the most important discovery was that the animals inoculated with such enfeebled cultures were protected against the attack of the most virulent cultures of the same micro-organism. The next step was the discovery that the blood of an animal thus artificially protected from a particular disease contained material which can be transferred to other animals and protect them from the same disease."

(e)—"When a tree, or a bundle of wheat or barley straw, is burnt a certain amount of mineral matter remains in the ashes—extremely small in comparison with the bulk of the tree or the straw, but absolutely essential to its growth. In a soil lacking, or exhausted of, the necessary mineral constituents the tree cannot live, the crop cannot grow. Now, contagia are living things, which demand certain elements of life just as inexorable as trees, or wheat, or barley, and it is not difficult to see that a crop of a given parasite may so use up a constituent existing in small quantities in the body, but essential to the growth of the parasite, as to render the body unfit for the production of a second crop. The soil is exhausted, and, until the lost constituent is restored, the body is protected from any further attack of the same disorder. To exhaust the soil, however, a parasite less vigorous and destructive than the really virulent one may suffice; and if, after having, by means of a feebler organization, exhausted the soil without fatal result, the most highly-virulent parasite be introduced into the system, it will prove powerless. Some such explanation of non-recurrent diseases naturally presents itself in the germ theory."

The foregoing alleged facts and theories are accepted, more or less, in support of the doctrine that zymotic diseases are essentially propagated,

direct or indirect, by microbes; yet the question is far from being settled as to the nature of the process that effects the construction of the materies morbi of contagion. And I am reminded that the facts for examination exist in the following order:

First appears the specific micro-organism.

Second—Said bacillus excretes a substance called toxin.

Third—Said toxin acts chemically on the albumen of the blood cell, producing tox-albumen.

Thus, to examine the disease and microbe problem within the limit of the mentioned divisions, allow me to draw an imaginary equator between sections first and second, and thus divide this subject into its two legitimate and distinct fields for research.

The first division includes the possibility of special microbe existence—together with human life functions—constituting problems in the field of vital force science; while sections two and three include operations devoid of life force agencies, and in the field of chemical and other alleged force agencies. All science phenomena is presented by some department of active force agency, and the fact should be recognized that medical scientists ignore the function of vital force agency in disease problems. Thus the facts developed and presented by this agency are sought to be explained by the action of chemical and other mysterious agencies. Now such a feat is impossible, although the attempt is still persisted in with as much apparent expectancy as was anticipated many centuries in the past.

It has been found difficult to explain how the microbe acts to develop disease; in the meantime it was discovered that said micro-organisms excrete a toxin, that acts on the same principle that all poisons act, which seems to solve the problem satisfactorily—connecting the cause of disease with the production of disease. As a problem in science, however, the cause of disease does not develop disease; there may be thousands of causes of disease, while disease is developed by the abnormal action of the life force agency. On the life side of this equator, in the field of biological science, it can be determined that poisons and the causes of disease do not act. The cause of disease is always passive, while the vital force agency does all the acting.

Also it will be a very difficult problem to solve, as alleged, that the microbe can either secrete or excrete a toxin. The microbe is not sufficiently complex in its make-up to exercise such functions.

The toxin is not a secretion or excretion of the microbe, but the dead microbe itself, little, if any, deteriorated by chemical changes. The materies morbi is first a pathological product of abnormal vital action and food for microbe development, that may be bottled up by the micro-organisms as a wise provision of nature—being less injurious, and when the microbe life ceases there exists a compound organic body of vital synthesis like all organic creations, possessed of chemical constituents that may enter into chemical changes. And the virulency of said compound depends wholly on the food material of the microbe—see quotation b. It remains an unsettled question whether the first chemical changes with such organic compound develops a virus of worse quality than the pathological product itself—see quotation a. Whatever the fact may be, the microbe does not attack the human system, as represented by reputed authorities—see quotation (b). Neither do chemical compounds, as chemical forces, act on living structures, but may act on such structures after life becomes extinct. Biological science is not taught—but life facts only, thus making void much that is accepted. Notwithstanding, the medical scientist persists that the explanation of non-recurrent disease and the bacillus problem is vested in sections two and three on the chemical force side of the equator; such is not the fact. This problem of micro-organisms and non-recurrent disease is wholly on the life force side of the equatorial line, within the field of vital force functions, a department relegated to future generations for a solution. In the meantime the modern scientist is content in trying

to solve vital force problems by the application of chemical and other force agencies. In brief, the doctrine that causes of disease act, and that material medicines have "active principles," while acceptable as an inheritance from authorities coming down from the dark ages; such is really a serious delusion in expected source of operative principles.

The fundamental and operative principles of medical and biological science exist only in the functions of the four active vital properties of the life force agency—a department of nature's forces not taught in the schools, but outlined by me in the Times and Register of October 12 and 19, 1895.

We must recognize that micro-organisms constitute a world of life coming into existence wherever food material and opportunity favor such development. The waste tissues of a healthy organism favor the development of the health microbe, while pathological vital action with all disease elaborates a different material compound constituting food for the growth of other varieties—called disease microbes. The essential difference between health and disease microbes is implied alone in the food material from which it is constructed. The disease microbe is constructed from pathological virus of vital action, and, while such micro-organisms may bottle up the special virus temporarily, giving it a longer existence, later such microbe may be a carrier rather than a creator of special virus. The health microbe may become a disease microbe, and inversely, in accordance with the quality of the food material from which it is constructed. See quotation (d).

It may be instructive to consider the career of a microbe colony developed in association with scarlet fever or small-pox. Such micro-organisms multiply with great rapidity, but die out as soon as the pathological food supply is cut off by the restoration of physiological function. Scientists say the soil is exhausted, but with recurrent disease the special microbe appears as frequent as such disease. The individual who has recurrent and non-recurrent disease continues to live on the same food material—the same material soil, while with recurrent disease the soil is not exhausted, but the very opposite with non-recurrent disease. See quotation (e). With such facts it may appear later that some different factor is involved—not implied in exhausting the soil of its elementary constituents. There is to be considered also the distinction between a blood serum virus and a culture fluid virus. The former is a product of pathological vital action—the virus accumulating in the blood faster than it can be eliminated. The latter is similarly produced, which later enters into the construction of micro-organisms, transferred to an artificial medium undergoing dissolution and dilution, and recognized as attenuated virus, without sufficient chemical change to destroy its specific character. Such virus gets its special characteristic disease contagia from a pathological life function, neither the microbe nor chemical action being capable of keeping up the standard of virulency —which is important to consider— in artificial pabulum. See quotation (d). All disease problems, like astronomical problems, as enigmas for solution, are based on certain primary operative fundamental principles, while non-recurrent disease includes all of the same principles, with certain additional characteristics. There is a limit to research in this direction, beyond which the mind cannot penetrate, and such premises exist in the functions of the four active vital properties of life force agency. For the purpose of giving relative value to the quotations in this essay it is necessary to recognize some special operative fact in biological science— of sufficient importance to be called the common denominator of numerous other facts. Thus we must recognize that pathological vital action may produce both primary and secondary causes of disease. Also with certain disease that such product can be produced but once, and in connection with this fact, may be found the explanation of non-recurrent disease. The facts of quotation have a relative value to such common denominator, which supports their existence in the

field of events. Inflamed to a certain degree serous tissues are deprived of the repetition of functions; also with certain glands. And is it not more rational to infer an approximation to such kind of facts? If so, non-recurrent disease is explainable not in the fact that the microbe has consumed all the elements of the soil, but no special virus can be created the second time to feed such microbe, as with recurrent disease. Keep in mind that the cause of disease is always passive, being a presence that causes abnormal sensation; in other words, irritability; to be succeeded by pathological vital action, which is the other name for active disease. And with non-recurrent disease such fact exists, for no other reason than what is implied in that other fact—that pathological vital action can produce such virus but once.

The materies morbi is created originally by a pathological vital act—not by a microbe or chemical action. The special microbe of pure virus construction may be made docile when fed on artificial food, and again made the direct or indirect cause of disease when fed on special virus. Blood serum produced by pathological action with horse tissues has not that degree of virulency as when created within the human organism, and the modus operandi of protection against non-recurrent disease when injected into other animals, or the human subject, in repeated small doses, is explainable from several associate principles.

When zymotic disease becomes fatal it is not due alone to the virus of primary contagion, but in the rapid production of a similar virus, from pathological vital action, developed much faster than can be eliminated. Thus when attenuated virus of horse serum is introduced a less severe vital disturbance succeeds—that is, the special virus is created less rapidly, permitting elimination to more nearly keep up with its production. Also the injection of attenuated virus in repeated small doses develops that condition called toleration, modifying the rapidity of virus construction. In the meantime that mysterious change is slowly taking place with the diseased cell tissues—that occurs but once—which forbids such structures from experiencing a similar pathological disturbance, thus making it practically safe to subsequently bring pure virus in contact with the human organism without awakening that special pathological vital act that represents non-recurrent disease. Another factor is implied, that during such disease the injection of virus deploys vital action, affording relief by diminishing the rapidity of virus construction. Therefore, we repeat that non-recurrent disease is due to this one fact alone; that the human organism—as well as other animal organisms—cannot develop such special virus but once in a lifetime, and the attenuated virus is made the exciting cause of such disturbance slowly and thus more safely developed.

With the inference as expressed by some scientists, that the microbe consumes the soil to such extent that another crop of similar disease microbes cannot survive, as an explanation of non-recurrent disease, is made to support the germ theory, that such disease is a sequence of the microbe—while the opposite is true. The microbe is an adventitious creation, dependent on the manufacture of such virus for its existence. The peculiar fact of non-recurrent disease being due wholly to histological changes from pathological vital action, that cannot repeat itself. Thus it is very inappropriate, misapplied and contradictory to the operative principles of science to attach such importance to the function of the microbe, direct or indirect, as may support the germ theory of disease.

The microbe is a microbe, but not a germ in any sense whatever. The microbe may subsist on various kinds of food produced by health or disease action, and the virus from which the non-recurrent disease microbe is constructed, both before and after the termination of microbe life, may be the cause of such disease in an organism that has not been previously diseased.

Thus, when such virus is bottled up, by virtue of micro-organism construction, it is less injurious. If the scientist must use the word "germ," the microbe should be regarded as a

germ of temporary protection rather than a disease germ, for such micro-organism is a scavenger—a wise provision in aid of self-preservation of the diseased human organism. See quotation (a).

Microbes do not attack the human organism, as alleged, but attack virus and devour it, being without power to do other things. Serum and virus are not powerful—such material is passive. See quotations. The Great Architect of the universe has not instituted a plan of concealed infantry, to attack human beings and destroy their lives!

It is not possible to comprehend disease problems without first recognizing the distinct functions of the operative principles that execute the varied phenomena of the human organism—a department which at present is not under mental cultivation. The mind is handicapped in its application to scientific research, from a previous acceptance of false doctrines, expressed in the language of "active cause of disease" and "active medical principle." The cause of disease and material medicine is passive—passive to the full extent that such word may imply.

There are no "active principles" that operate the living human organism, except vital. The cause of disease, and also material medicine, causes sensations—often called irritability—that, as such, occasion the involuntary life force to become active—active in the development of either health or disease.

The involuntary life forces are brought into activity in response to a sensation that may be produced by the cause of disease, or from medicinal contacts, while the voluntary life forces are made operative in response to the mind.

A practice of medicine, based on the correct theory of the relation of cause and effect, and knowledge of true nature of disease—how it is produced—will enable practitioners to save many thousands of lives annually that are now sacrificed from the acceptance of false doctrines.

The perils of the hour demand a better comprehension of the first principles of medical and biological science—that department which has been relegated to future generations for a solution; implied in the functions and nature of vital force—the operative agency that develops health and disease.

The first problem to solve consists in demonstrating whether the cause of disease is active, and that material medicine has "active principles." Or, is this ancient doctrine, of more than a thousand years' perpetuation, a delusion, crude and dangerous in its application, while the real active principles of medical and biological science exist in the normal and abnormal functions of the four active vital properties of life force agency? The medical profession are laboring with all commendable zeal, under disadvantages of far greater magnitude than did the ancient astronomers, before it was recognized that the sun was the centre of the solar system, and that planetary orbits were elliptiform, in whose paths each planet moved at a different rate of speed, in different parts of its orbit. The development of medical and biological science requires the application of finer thought, in place of more nicely-conducted experiments.

If the medical profession of this generation wish to escape passing into history with a record of being more interested in the perpetuation of the loose, crude and obscure dogmas of early antiquity than in a better development of a life-saving science, they must call a halt in the teaching of false doctrines, and give attention to verifying or repudiating the allegation that vital force agency constitutes the only operative active principles that present health and disease.

The situation cannot be stated better than by the retiring president of the American Association for the Advancement of Science, Professor Daniel G. Brinton, of the University of Pennsylvania, August 29, 1895: "Ignorant of his past, ignorant of his real needs, ignorant of himself, man has blundered and stumbled up the thorny path of progress for tens of thousands of years. Mighty States, millions of individuals have been hurled to destruction in the perilous ascent, mistaking the way, pursuing false paths, following blind guides."

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THE EDITOR AND THE READER.

As we approach the close of the year it is customary for most journals to take its subscribers into their confidence and set forth what they hope to accomplish during the coming year. The editor usually makes the stereotyped promise of larger reading space, a larger installment of fresh materials, with renewed energy, and, in a word, more for less compensation.

To our faithful, old patrons we have no new pledges to make, as they well know, and are ready to ackuowledge, that for the small price of the "Times and Register" we have honestly endeavored to have each and every one feel assured that the full value of his outlay was realized. Defects, we admit; the typographical work and proof-reading have been, in some instances, not what we desire, but now, that the first of the year is at hand, new arrangements will be made to obviate those blemishes, and it is promised that they will occur less often in the future. Our aim will be to keep our readers supplied with all the latest and the best in the science of the healing art, besides endeavoring to supply such miscellaneous items of medical news as will interest practitioners. Arrangements have been made with Dr. Thomas H. Manley to continue his serial essay on the "blood," in which will be set forth the latest known knowledge on this important subject, as relates to its morphology, physiology and pathology. Such a work has not been written in English since the time of John Hunter, and now that science has placed in the hands of the investigator instruments of accuracy and precision, and advances in all the sciences have been great, we may be assured that this feature alone will much more than repay the reader for his outlay for the journal. Dr. Manley comes to his work with a broad theoretical and technical knowledge, seasoned and leavened by more than twenty years' hospital and general practice; so that this feature will be something more than a rehash of others' work, or the mere rickety translation of some young bud, who is full to overflowing with science, but knows nothing of practice. On the part of our readers, we will always hold our pages open for such contributions as they wish to make, provided only that they come to us exclusively; besides, we would appreciate it as a favor if, at any time, there are grounds for complaints, they are sent to us. We intend during the coming year to place on the tables of our subscribers a medical journal unexcelled by any other, and only expect that they and others of the profession will sustain us in our undertaking.

Foreign Exchanges.

By Drs. CHANDLER and DAVIDOW.

ANTISPASMIN—A NEW REMEDY AGAINST WHOOPING COUGH.

(Archiv. f. Kinderheila, xviii, p. 38.)

Antispasmodin (Merks) consist of one molecule narceine sodium and three molecules of salicylate of soda. It is easily soluble in water, while the usual narceine preparations are sparingly, and the result mostly not pure.

Demue first experimented with antispasmin as a hypnotic and sedative. Author, in a period of one year and a half, treated 200 whooping-cough cases of various ages, also adults. In each case author obtained good results by diminishing the intensity and number of attacks, as well as shortening the period of duration.

Even in small children, and after prolonged use, there is no ill effect on the stomach or intestines or any cumulative narcotic effect.

The antispasmin was prepared partly in 5 and partly in 10 per cent. solution of ag. amygd. amas dilut., more often in a tablespoonful sugar water; rarer to disguise the bitter taste in milk or cocoa. From the five per cent. solution children received: Below one-half year, 3-4 times daily, 3-5 grs. per dose; below one-half year, 3-4 times daily, 5-8 grs. per dose; below one year 3-4 times daily, 8-10 grs. per dose; below two years, 3-4 times daily, 10-12 grs. per dose; below three years, 3-4 times daily, 15-20 grs. per dose. Children over three years old received from the ten per cent solution, three times a day, ten drops; if improvement was not soon noticed, it was given four times a day, from 10 to 15 drops, and to older children and grown-up, from 20 to 25 drops.

As the solution becomes easily decomposed it should be put up in blue bottles, well stoppered.

MENTHOL AGAINST CATARRH AND INFLUENZA.

De Reinold Wunsche (Dresden). (Therap. Monatschr, No. 9, '95.)

Author recommends 0.5-1.0 menthol in 10.0 chloroform against catarrh, and not only does it act abortive in the first stage, but acts good against infection from influenza.

From four to six drops are placed in a small plate; this quantity is quickly rubbed on the hands and tightly placing one on the other, is put on the mouth and nose, the vapor of which is inhaled by deep inspirations. By this method it is at once felt that the vapor molecules of the medicine touch not only the mucous membrane of the nose, mouth and throat, but reach the air vessels. By the first two or three inspirations the sweet chloroform odor predominates, but right after the menthol, which is inhaled in small particles, and the patient after some time, from the taste and odor feels the lasting effect of the menthol.

The most violent sneezing is lost by inhalation of this vapor; in fact, it ceases after the first operation.

Author advises four to six times during the day to absorb the on coming coryza. At first there is a slight increase in the nasal discharge, which soon stops. Pharyngeal and laryngeal pains can be quickly eased if not entirely relieved by this method.

TREATMENT OF PNEUMONIA WITH DIGITALIS.

H. Naegli-Akerblom (Cbl. f. innere Med., 1895, No. 32.

Author, from his experience in the Baseler Poliklinick, following the initiation of Petresco, recommends large doses of digitalis in croupous pneumonia. Of the infusion, single doses of one grain, daily, from four to five grains, is accompanied with no evil results. The author thinks this drug to be the most important therapeutic agent in croupous pneumonia. In large doses it acts abortive on the disease, acts well on the heart, lungs and blood. In the latter it is especially active in increasing the leucocytes, namely; the polynuclear. In accordance with the researches of

Professor v. Jocksch (Cbl., 1892, p. 431) hyperleucocytosis in croupous pneumonia, warrants a favorable prognosis.

With the digitalis, it is advisable to combine cold water, which likewise acts in increasing the leucocytes.

A NEW METHOD TO TREAT ENDOMETRITIS.

v. Winkel. Munchener Med. Wochenschr, '94, No. 31.

The classification of endometritis etiologically, is according to the author impractical. It should be anatomically. The exact diagnosis should be made by the round Schultze's probe tampon, and the microscopical examination of the scraped portion; eventually by replacing the uterine inflexion after former dilatation. The treatment consists of washing out with disinfectants and astringent liquids, injections of liquor ferri sesquichlor, with Bracen's syringe, application of medicated styptics, caustics or cautery in persistent cases, or mucous abrasions; in the latter the author operates under anasthesia fixation and dilatation of uterus, and after operation washes with cotton, moistened with liquor ferri sesquichlor.

PATHOLOGICAL ANATOMY OF ERGOTISM.

N. Winogradow, Wratch, 21, 22, 23, 1895.

From the later part of 1889 to autumn, 1890, in the State of Wjatka, 2749 people became afflicted with ergotism poisoning; 535 cases of which proved fatal. The convulsions were observed in all cases; no incident of gangrene was noticed. In seven cases the liver, spleen and kidneys were examined microscopically. The spleen showed the following changes: The connective tissue frame work strongly marked, the pulp hyperemic, the Malpigian bodies distinctly marked, a few greatly enlarged and hyperplastic, others appear in the centre as a uniform layer with no nuclei. The arterial walls, particularly the central vessels of the Malpigian bodies, are thickened glossy and show hyaline degeneration. The liver is hyperemic, the liver cells atrophied, the nucleus either lost or the staining unsatisfactory; the arterial wall had the same changes as in the spleen, the lumen at times entirely obliterated, results of coagulation, necrosis of the liver cells. In the kidneys the changes prevail in the cortex substance, hyperemia of the glomeruli, formation of a uniform mass in Bowman's capsule, with consecutive compression and changes of the glomeruli, glossy looking changes in the blood vessels with coagulation necrosis of the epithelium of the urinary tubules.

In acute catarrh Messiere recommends the following powder:

R Bismuthi subnitr 5.0
Camphor brital.....0.5
Acid boric pulv.....2.0
Morphii hydrochl.....0.03
Cocaini hydrochl 0.02
Pulv. benzoes.....1.0

0.1 menthol may be substituted for the cocaini.

In chronic tonsilar hypertrophy the same author recommends the local application of the following:

R Iodi puri
Potass. iodid. aa2.0
Glycerini
Aqua distilat.....aa10.0

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At the last meeting of the Paris Academy, Professor Nencki (St. Petersburg), was elected corresponding member.

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A. D. D.

Dr. E. C. Mann, the eminent author on medical jurisprudence, of New York city, has received advice of his appointment as honorary member of the Imperial University of Kharkiff, Russia, and associate member of the Societe Medico Psychologique, Paris.

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